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Night-Time and Winter Measurements of Atmospheric Turbulence in a Canadian Shield Black Spruce Forest

B.D. Amiro, F.L. Johnston, L.L. Ewing

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ABSTRACT

The Canadian nuclear fuel waste management program has been studying the many processes whereby radionuclides could potentially be transported through the biosphere, if they should be released from a deep disposal vault in the Canadian Shield. Much of the Canadian Shield is forested and if radionuclides reach the surface, they could be transported through forests via atmospheric motions and turbulence. To study these processes, a series of experiments on atmospheric turbulence within a boreal forest canopy were conducted during night-time and winter when stable atmospheric conditions predominate. These measurements complement previous studies during unstable and neutral conditions. Turbulence statistics for 71 periods during 1989/90 are presented. Plots of many of the turbulence statistics show little pattern as a function of atmospheric stability for most parameters. However, turbulence intensity and skewness of the vertical wind velocity are greatest during near-neutral conditions, and become smaller with increasing stability.

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1. INTRODUCTION

The Canadian nuclear fuel waste management program has studied some of the processes whereby radionuclides cycle through the biosphere. This research has been used in the development of assessment models to estimate the potential consequences, if radionuclides from a geologic disposal vault migrate to the surface environment (Davis et al. 1993). The Canadian concept has focused on disposal in the Canadian Shield, and much of the Shield is covered by boreal forest. The exchange of radionuclides between surfaces and the atmosphere is important as a dilution mechanism, and as a potential route of transfer to humans and other biota. This is especially true because the key radionuclides (^{14}C, ^{36}Cl, ^{129}I) are potentially gaseous. Atmospheric turbulence is a controlling mechanism for this exchange, and knowledge of turbulence, especially in forests, is important to better understand the processes.

Previously, we documented some of the turbulence features observed under daytime conditions during the snow-free season in boreal forest canopies (Amiro and Davis 1988, Amiro 1990a,b). Even though the above-canopy environment may be unstable, a temperature inversion within the canopy may be present during the day (Amiro 1990a). However, most of our measurements did not include night or winter conditions. Studies within deciduous forest canopies have shown that the characteristics of turbulent motions are greatly influenced by stability, with night and day conditions being quite different (Baldocchi and Meyers 1988, Leclerc et al. 1990). In these studies, stable conditions were found to dampen turbulent motions both above and within the canopy.

In southeastern Manitoba, Canada, stable atmospheric conditions occur about 90% of the time at night, and about 40% of the time during the day in most months (Davis and Reimer 1980). Daytime stable conditions occur only about 20% of the time during the summer. These atmospheric conditions can be considered typical for much of the Canadian Shield. Despite the high frequency of occurrence of stable conditions, most data on atmospheric turbulence within local boreal forest canopies have been collected during unstable conditions associated with less harsh working conditions.

Here we report data from experiments designed to study atmospheric turbulence within a boreal forest canopy during night-time and winter conditions. This study provides additional data on turbulent transfer mechanisms that control local dispersion in forests: an important aspect to understand surface/atmosphere transfer of radionuclides that could potentially reach the biosphere from an underground disposal vault for nuclear fuel waste on the Canadian Shield.

2. STUDY AREA

The study area is located near the Whiteshell Laboratories (50° 11'N, 96° 04'W) in southeastern Manitoba, Canada, about 100 km east-northeast of Winnipeg. The region is on the southern edge

of the Canadian Shield, and the Prairies begin about 30 km to the southwest. The measurement site is flat with elevation varying by less than a few meters per kilometre fetch. Upwind fetch is about 1 km. The forest is a stand of black spruce with 7450 trees/ha with a mean stem diameter of 8 cm. The leaf area index is about 10 m^2 leaf/m^2 ground with a mean canopy height of 10 m (Amiro 1990a). There is a dead branch space below about 5 m with low shrubs (less than 1 m high) on the forest floor.

3. METHODS

3.1 MEASUREMENTS

Measurements were made during the winter of 1989/90. An 18-m light-gauge tower was erected in the forest and all sensors were mounted upwind from the tower (to the south). Two three-dimensional propeller anemometers (R.M. Young Co. Traverse City, MI) were mounted above the canopy at heights (z) of 18 m and 12 m, and two three-dimensional sonic anemometers (Applied Technologies Inc., Boulder, CO model SWS-211/3AE, 15-cm path length) were mounted within the canopy at heights of 6 m and 2 m. The signals from the anemometers were sampled at a rate of 5 s^{-1} by a datalogger (Campbell Scientific, Logan, UT, Model 21X). All data were stored on cassette tape for analysis after a run of approximately 30 to 45 min.

Net radiation (Rn) was measured above the canopy with a net radiometer (Middleton Co., Melbourne, Australia, Model CN-1). Air temperature profiles were measured above and below the canopy at heights of 18, 13.6, 9.6, 6.7, 5.3, 3.8 and 1.4 m using 25-µm-diameter unshielded thermocouples. Another 25-µm-diameter thermocouple was placed beside the propeller anemometer at the 18-m height so that the heat flux (H) could be calculated using eddy correlation.

3.2 DATA ANALYSES

Data were first quality-controlled by printing out the time series of the run and visually inspecting the data for spikes or periods of missing data. Erroneous spikes were also identified by looking for large values of kurtosis in the statistics, which could indicate the presence of a few bad data points. Single spikes were edited out so that only the single bad data point was lost. This was usually caused by some noise problem in a sensor or in the data-logging system. The whole run was not used when there were many spikes (usually >20) or when signals from sensors were missing.

Statistics of the data were then calculated for each period for each sensor. Measurements are defined as:

u = streamwise velocity (m/s),
v = crosswind velocity (m/s),
w = vertical velocity (m/s), with positive w being upwards,

T = temperature (°C),
where a prime (i.e., u', v', w', T') denotes the deviation from the mean value for the run.

The u and v components were calculated by transforming the co-ordinates from the x and y lateral measurement planes, such that the mean v velocity was zero and the u vector was parallel to the mean wind direction. For the vertical component, the anemometers were levelled with respect to gravity and the terrain was flat; therefore, we assume that the vertical measurement in the z dimension is the correct value for w. The propeller anemometers were first cosine-corrected following the method of Horst (1972).

The statistics are defined as:

Mean: arithmetic mean of the time series.
Sigma: standard deviation of the time series.
Skewness: skewness of the time series, defined as the third moment divided by the cube of the standard deviation.
Kurtosis: kurtosis of the time series, defined as the fourth moment divided by the standard deviation to the fourth power.
Means of primes: arithmetic means of triple products of the fluctuations, e.g., the mean of u'v'w'.
Momentum flux: $= -\rho \{u'w'\}$, where ρ is the density of air and $\{u'w'\}$ is the mean of the products of the fluctuations of the streamwise and vertical velocities.
Heat flux: defined as the sensible heat flux , $H = \rho C_p \{w'T'\}$ where C_p is the specific heat of air and $\{w'T'\}$ is the mean of the products of the fluctuations of the vertical velocity and temperature. Note that H measured at 18 m is a true heat flux using a thermocouple whereas H at 2 m is a virtual heat flux including a moisture component because the temperature from a sonic anemometer was used.
u_*: the friction velocity defined as $\{u'w'\}^{0.5}$.
Monin-Obukov Length: a measure of atmospheric stability, $L = - u_*^3 \rho C_p T / (k g H)$, where T is the mean air temperature in K, k is the von Karmann constant (= 0.4), and g is acceleration due to gravity.

We also calculated the gradient Richardson number, Ri, as another measure of atmospheric stability. Unlike L, which is based on fluxes, Ri is based on measurements of temperature and wind speed differences between two heights, so

$$Ri = (g/T_a)\,(\Delta T/\Delta z + 0.01)/(\Delta u/\Delta z)^2 \quad ,$$

where T_a is the absolute air temperature, and ΔT and Δu are the temperature (K) and wind speed (m/s) differences over the height difference Δz (m). We calculated Ri values for the top (18 m-12 m), mid (12 m-6 m) and bottom (6 m-2 m) intervals. Negative Ri values indicate that the atmosphere is unstable, whereas positive ones indicate that it is stable.

4. RESULTS AND DISCUSSION

4.1 RUNS

Through 1989 and 1990, 125 runs were completed on 50 different days (Table 1). However, only 71 runs were deemed to be of good quality following quality control procedures, editing and tests. The raw data are archived on CD-ROM in the Whiteshell Laboratories Waste Management Records Management System as 97-ESB-001.

4.2 STATISTICS

Mean statistics were derived for each of the 71 good runs. The statistics are listed in Appendix A.

4.3 TIME SERIES

Some time series have been presented by Amiro and Johnston (1991) and graphs of the time series were created for all runs. Similarly, power spectra were created for most of the runs. However the large volumes of data have not been included in this report. These analyses can be re-created from the raw data sets on CD-ROM.

4.4 TEMPERATURE PROFILES

The temperature profile data are given in Table 2. Measurements below a height of 10 m are within the canopy. In most runs, the highest temperatures are above the canopy and decrease within. However, there are some runs where the air is warmest near the canopy top; usually when the run is during the day.

4.5 STATISTICS AND ATMOSPHERIC STABILITY

One of the questions is whether the turbulence statistics vary with atmospheric stability. We plot u_*, mean u, sigma u, sigma v, sigma w, sigma w/mean u, skewness u and skewness w as a function of Ri in Figures 1 to 3. This was done for calculations of Ri at the different levels in the canopy. The data are normalised as the 2-m or 6-m measurements divided by those at 18 m. This normalisation allows the within-canopy data to be looked at while minimising the impacts of different conditions outside of the canopy (i.e., at 18 m). The value of "sigma w/mean u" in Figure 3 reflects turbulence intensity. We also plot these same quantities as a function of the Monin-Obukov length, L, in Figures 4 to 6. We have plotted these as the inverse of L multiplied by ten. The inverse is commonly plotted to prevent the value going to infinity when H gets small (neutral conditions), and the multiplier of ten was used to avoid small values on the axis.

Most of the plots show scatter with little pattern, indicating that many of the quantities do not follow a trend with atmospheric stability. This happens when using both Ri and L at all heights. However there are some exceptions. The turbulence intensity, sigma w/mean u, reaches its

highest values in near-neutral conditions (i.e., Ri and L approach 0) (Figures 3 and 6). The intensity tends to be less in the more stable conditions, but this pattern shows best when stability is classified using data at the top of the canopy. Often, stability indicators are not well correlated among different heights in the canopy (Figure 7). Another feature is that the skewness of w shows both its most positive and negative values in near-neutral conditions (Figures 3 and 6). In the most stable conditions, skewness of w approaches 0. Zero skewness indicates that the data distribution is approximately Gaussian (assuming that the higher moments are also Gaussian), and this makes it easier to derive parameter values for numerical models of atmospheric dispersion within forests. Negative skewness of w is caused by large-scale motions aloft being carried downward (negative w), whereas near the ground, there is no corresponding source of large updrafts (positive w).

5. CONCLUSIONS

This report serves as a data archive of the turbulence measurements conducted during 1989-90. The mean statistics for the runs are presented in Appendix A and the data are archived on CD-ROM in the Whiteshell Laboratories Waste Management Records Management System as 97-ESB-001. Plots of many of the turbulence statistics show little pattern as a function of atmospheric stability for most parameters. However, turbulence intensity and skewness of w are greatest during near-neutral conditions, and become smaller with increasing stability.

The data collection was initiated in support of numerical models of radionuclide transport through forests. These models were intended as a rigorous treatment of dispersion to improve our accuracy and knowledge of radionuclide transport, and to provide a basis for simpler models that could be implemented in an assessment model. This modelling program has since been terminated but the data are still valuable for model development. If the geologic disposal of used nuclear fuel proceeds to siting, site-specific atmospheric data will be needed for an environmental assessment. However, the type of data collected in the present study would not normally be needed for site characterisation. Instead, more general dispersion characteristics would be studied based on simpler measurements. The detailed turbulence measurements presented in the current study could be used as input to dispersion models if radionuclide transport through a forest would need to be assessed rigorously at a specific site.

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TABLE 1

DATA COLLECTION PERIODS (RUNS) DURING THE 1989-90 EXPERIMENTS

Date	Run	Start time (CDT)	Comments
1989			
July 31	A	1339	Overcast
	B*	2117	Overcast
	C*	2200	Clear, calm
August 16	A	2056	Clear
	B	2150	"
	C	2239	"
August 17	A*	2117	"
	B*	2201	Partly cloudy
August 21	A	2033	Partly cloudy, calm
	B	2130	Overcast
August 23	A*	2025	Clear
	B*	2100	"
	C*	2140	"
August 24	A*	2047	"
	B*	2120	"
	C*	2220	"
September 5	A*	2055	"
	B*	2129	"
	C*	2200	"
September 12	A*	2017	"
	B*	2108	"
	C	2219	"
September 13	A	1938	Partly cloudy
	B	2040	"
	C*	2138	"
September 14	A*	1934	Clear
	B	2100	"
September 24	A	1917	Partly cloudy
	B	1947	"
September 26	A	1935	Clear, windy
	B	2018	"
September 27	A*	2030	Clear

continued...

TABLE 1 (continued)

DATA COLLECTION PERIODS (RUNS) DURING THE 1989-90 EXPERIMENTS

Date	Run	Start time (CDT)	Comments
	B	2110	Clear
October 3	A*	1920	"
	B*	2022	"
October 19	A*	1825	Partly cloudy
	B*	1926	"
	C*	2021	Overcast
October 20	A	0532	Clear
	B	0620	"
October 22	A	1920	"
	B	2015	"
October 23	A	0535	Clear, calm
	B	0615	"
October 24	A*	0520	"
	B	0620	"
October 25	A	0600	
	B	0645	
November 22	A	1125	Overcast, sparse snow
	B	1157	"
	C	1315	"
November 24	A	1410	Clear, snow on ground.
	B*	1506	light snow on canopy bottom
November 28	A	1510	Clear, sparse snow on ground
	B	1608	"
November 30	A*	0938	Partly cloudy, snow on ground
December 1	A*	0923	Overcast
1990			
January 26	A*	1450	Overcast, snow on ground and canopy
	B*	1610	
January 29	A*	1517	Overcast, snow
	B	1553	"

continued...

TABLE 1 (continued)

DATA COLLECTION PERIODS (RUNS) DURING THE 1989-90 EXPERIMENTS

Date	Run	Start time (CDT)	Comments
February 6	A	1156	Partly cloudy, snow on ground
	B	1400	"
	C	1517	"
	D	1614	"
	E	1649	"
	F*	1714	Clear, snow on ground
	G	1928	"
	H*	2026	"
February 7	A	1344	Partly cloudy, snow on ground,
	B*	1416	some snow on trees
	C*	1536	"
	D	1915	"
	E	2010	"
February 8	A*	1341	Clear, some snow on canopy bottom
	B*	1501	"
	C*	1640	Partly cloudy
	D	2001	"
	E	2035	"
February 28	A*	1506	Clear, snow on ground,
	B *	1539	no snow on trees
	C*	1700	"
	D*	1839	"
	E*	1926	"
	F*	2105	"
March 1	A *	0626	Overcast, no snow on trees
	B*	0800	"
March 5	A*	1342	Partly cloudy, no snow on trees
	B*	1548	"
	C	1730	Clear
	D*	1927	"
	E	2054	"

continued...

TABLE 1 (concluded)

DATA COLLECTION PERIODS (RUNS) DURING THE 1989-90 EXPERIMENTS

Date	Run	Start time (CDT)	Comments
March 6	A*	1526	Clear, no snow on trees
	B*	1641	"
	C*	2110	"
March 7	A*	1247	Partly cloudy
	B*	1321	"
	C*	1419	Overcast
	D*	2015	Clear
March 9	A*	1438	Clear, no snow on trees
	B*	1607	"
March 10	A*	0635	Clear, calm
March 11	A*	2247	Overcast
March 13	A	1407	Partly cloudy, no snow on trees
	B	1547	"
March 19	A	1512	Partly cloudy, little snow on trees,
	B	1648	some snow on lower branches,
	C*	1845	top clear
	D	2222	Clear
March 28	A*	0900	Clear, snow on ground still
	B*	1042	"
March 29	A*	2243	Clear, snow on ground still
March 30	A*	0842	Partly cloudy, no snow on trees
April 2	A*	2205	Clear, 75% of ground clear
April 17	A	2032	Clear, very little snow on ground
April 18	A*	2127	Clear, no snow
May 26	A*	0000	Partly cloudy
	B	0030	"
	C	2100	Clear
May 27	A	0000	Clear
	B*	0300	"
June 7	A*	0000	Partly cloudy
June 16	A*	0000	Clear
	B*	0300	"
June 28	A	0000	Clear

* Runs where data passed quality control, or were edited; i.e., "good" runs.

TABLE 2

TEMPERATURE (°C) PROFILE DATA

Date	Run	18 m	13.6 m	9.6 m	6.7 m	5.3 m	3.8 m	1.4 m
31-Jul-89	C	20.33	20.12	19.78	19.36	19.26	20.21	19.17
31-Jul-89	B	20.70	20.51	20.32	19.78	19.62	20.61	19.45
17-Aug-89	A	21.27	21.14	21.03	20.78	20.72	20.73	20.61
17-Aug-89	B	20.81	20.69	20.60	20.43	20.39	20.41	20.31
23-Aug-89	C	21.03	20.88	20.76	20.47	20.22	20.27	20.29
23-Aug-89	B	21.35	21.19	21.03	20.73	20.52	20.60	20.63
23-Aug-89	A	21.44	21.28	21.14	20.90	20.73	20.81	20.83
24-Aug-89	A	21.63	21.54	21.50	21.32	21.15	21.27	21.38
24-Aug-89	B	21.36	21.26	21.19	21.00	20.83	20.94	20.97
24-Aug-89	C	20.65	20.55	20.50	20.32	20.14	20.24	20.25
05-Sep-89	B	17.82	17.21	16.19	14.21	13.95	14.05	14.01
05-Sep-89	A	18.11	17.41	16.19	14.05	13.73	13.79	13.82
05-Sep-89	C	17.58	16.93	15.81	15.83	13.70	13.75	13.62
12-Sep-89	A	8.40	7.99	7.17	5.74	5.30	5.28	5.34
12-Sep-89	B	7.32	7.07	6.60	5.93	5.62	5.51	5.47
13-Sep-89	C	10.60	10.37	10.05	9.77	9.67	9.79	9.90
14-Sep-89	A	15.93	15.31	14.47	13.11	12.85	12.89	13.07
27-Sep-89	A	17.63	17.01	16.27	15.11	14.65	14.56	14.58
03-Oct-89	B	3.14	2.78	2.03	0.69	0.19	-0.02	-0.26
03-Oct-89	A	4.58	4.20	3.31	1.46	0.70	0.41	-0.05
19-Oct-89	C	5.80	5.67	5.54	5.24	4.87	4.67	3.43
19-Oct-89	A	7.06	6.86	6.61	6.22	5.82	5.77	3.86
19-Oct-89	B	6.42	6.29	6.17	5.90	5.55	5.43	3.80
24-Oct-89	A	2.68	1.78	0.56	-1.71	-1.90	-1.85	-1.81
24-Nov-89	B	missing						
30-Nov-89	A	-5.68	-5.61	-5.58	-5.86	-5.94	-6.01	-6.14
01-Dec-89	A	-5.60	-5.63	-5.62	-5.72	-5.79	-5.89	-6.12
26-Jan-90	B	1.81	1.75	1.68	1.24	1.01		0.39
26-Jan-90	A	2.05	2.03	2.02	1.57	1.20		0.43
29-Jan-90	A		-3.28	-3.18	-3.37	-3.55	-3.68	-4.14
06-Feb-90	H	-4.25	-5.10	-6.20	-7.11	-7.04	-6.90	-6.78
06-Feb-90	F	-1.46	-1.86	-2.18	-2.64	-2.76	-2.78	-3.03

continued...

TABLE 2 (continued)

TEMPERATURE (°C) PROFILE DATA

Date	Run	18 m	13.6 m	9.6 m	6.7 m	5.3 m	3.8 m	1.4 m
07-Feb-90	B	2.44	2.70	2.97	2.42	2.30	1.99	1.17
07-Feb-90	C	1.08	1.25	1.38	0.67	0.60	0.44	-0.07
08-Feb-90	B	1.48	1.84	2.19	1.31	1.05	0.52	-0.98
08-Feb-90	A	0.92	1.23	1.67	1.11	0.93	0.43	-1.01
08-Feb-90	C	-0.18	-0.42	-0.84	-2.15	-2.44	-2.57	-3.06
28-Feb-90	A	3.75	4.14	4.58	4.20	4.04	3.79	2.76
28-Feb-90	B	3.52	3.61	3.90	3.32	3.03	2.79	1.89
28-Feb-90	C	2.53	2.45	2.35	1.87	1.64	1.42	0.68
28-Feb-90	D	0.05	-0.13	-0.30	-0.64	-0.82	-0.92	-1.31
28-Feb-90	F	0.52	0.34	0.11	-0.37	-0.56	-0.74	-1.33
28-Feb-90	E	0.46	0.29	0.09	-0.39	-0.63	-0.86	-1.46
01-Mar-90	B	1.25	1.19	1.20	1.08	0.99	0.95	0.56
01-Mar-90	A	1.26	1.14	1.07	0.84	0.73	0.67	0.28
05-Mar-90	B	-3.36	-3.24	-2.97	-3.33	-3.50	-3.71	-4.52
05-Mar-90	A	-4.63	-4.30	-3.77	-3.48	-3.86	-4.13	-4.76
05-Mar-90	D	-7.35	-7.57	-7.94	-8.34	-8.56	-8.62	-8.60
06-Mar-90	B	0.85	0.87	0.77	0.47	0.21	0.00	-0.93
06-Mar-90	C	-4.77	-5.14	-5.71	-6.56	-6.74	-6.74	-6.76
06-Mar-90	A	0.98	1.26	1.70	1.31	1.17	1.03	0.11
07-Mar-90	B	4.93	5.24	5.61	5.60	5.43	5.18	3.94
07-Mar-90	C	5.65	5.87	6.17	6.07	5.85	5.50	3.89
07-Mar-90	A	-1.31	-1.08	-0.88	-0.81	-1.04	-1.16	-1.58
07-Mar-90	D	1.91	1.58	1.00	0.13	-0.06	-0.17	-0.20
09-Mar-90	B	5.73	5.86	6.01	5.55	5.34	5.13	4.08
09-Mar-90	A	6.28	6.69	6.86	6.76	6.45	6.00	5.16
10-Mar-90	A	-4.38	-4.55	-4.88	-5.09	-4.97	-4.92	-4.71
11-Mar-90	A	4.33	4.29	4.31	4.21	4.10	3.97	3.08
19-Mar-90	C	-0.42	-0.50	-0.59	-0.75	-0.81	-0.78	-0.76
28-Mar-90	B	1.02	1.61	2.09	2.12	2.19	1.92	0.39
28-Mar-90	A	-1.45	-1.17	-0.80	-1.23	-1.64	-2.19	-3.76
29-Mar-90	A	0.83	0.65	0.33	-0.04	-0.17	-0.24	-0.29
30-Mar-90	A	5.60	5.72	5.83	5.51	5.01	4.50	2.83

continued...

TABLE 2 (concluded)

TEMPERATURE (°C) PROFILE DATA

Date	Run	18 m	13.6 m	9.6 m	6.7 m	5.3 m	3.8 m	1.4 m
02-Apr-90	A	-1.29	-1.36	-1.50	-1.61	-1.67	-1.69	-1.72
18-Apr-90	A	12.88	13.00	12.87	12.53	12.24	11.88	10.23
26-May-90	A	missing						
27-May-90	B	missing						
07-Jun-90	A	13.69	13.16	12.29	10.93	10.49	10.23	10.03
16-Jun-90	B	missing						
16-Jun-90	A	missing						

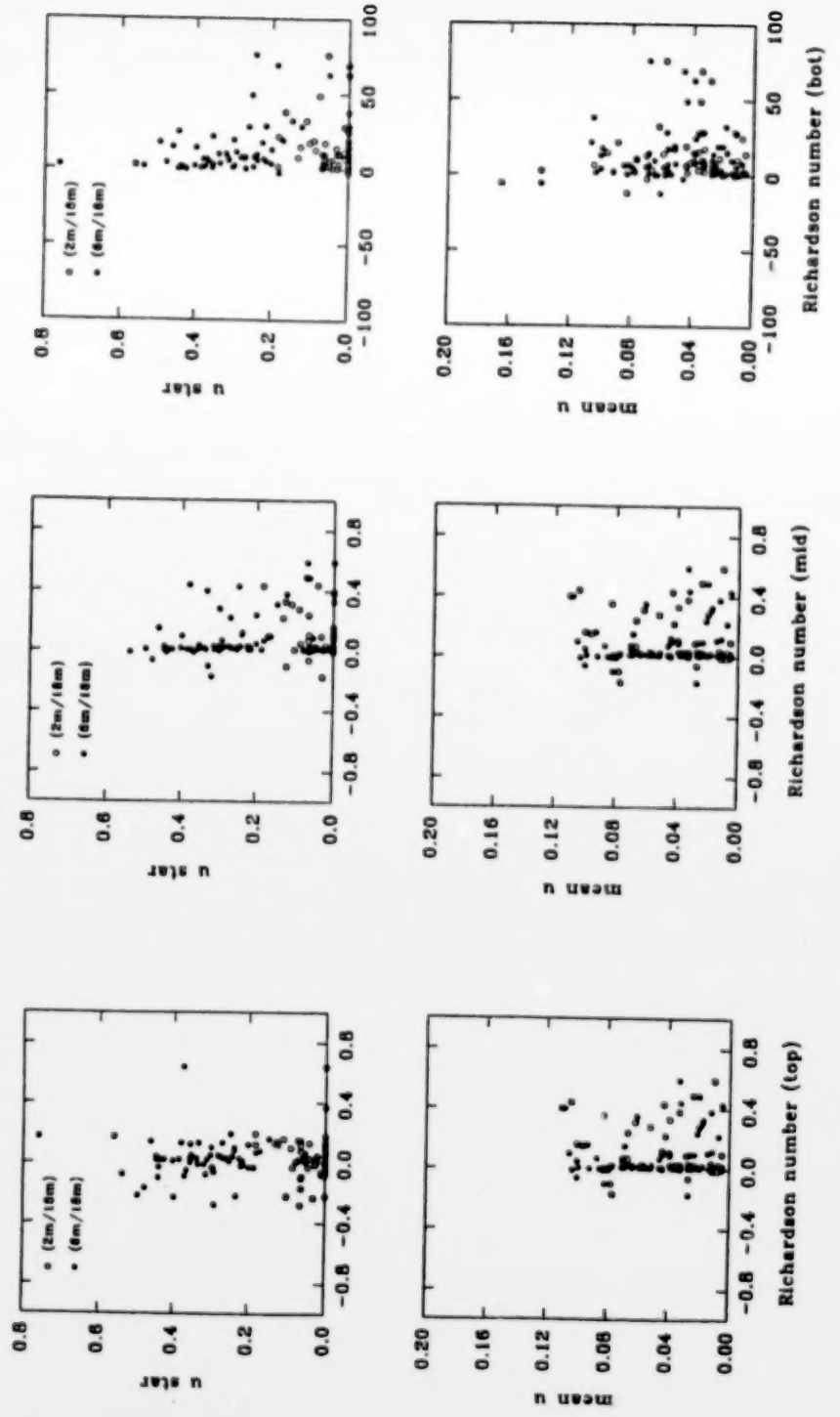

Figure 1. The friction velocity, u star (u*), and mean u as functions of the Richardson number calculated between the top (18-12 m), mid (12-6 m) and bottom (6-2 m) measurement levels. The units of u star and mean u are m/s, and the Richardson number is unitless. Open circles are the 2-m height normalised by the 18-m height, and closed circles are the 6-m height normalised by the 18-m height.

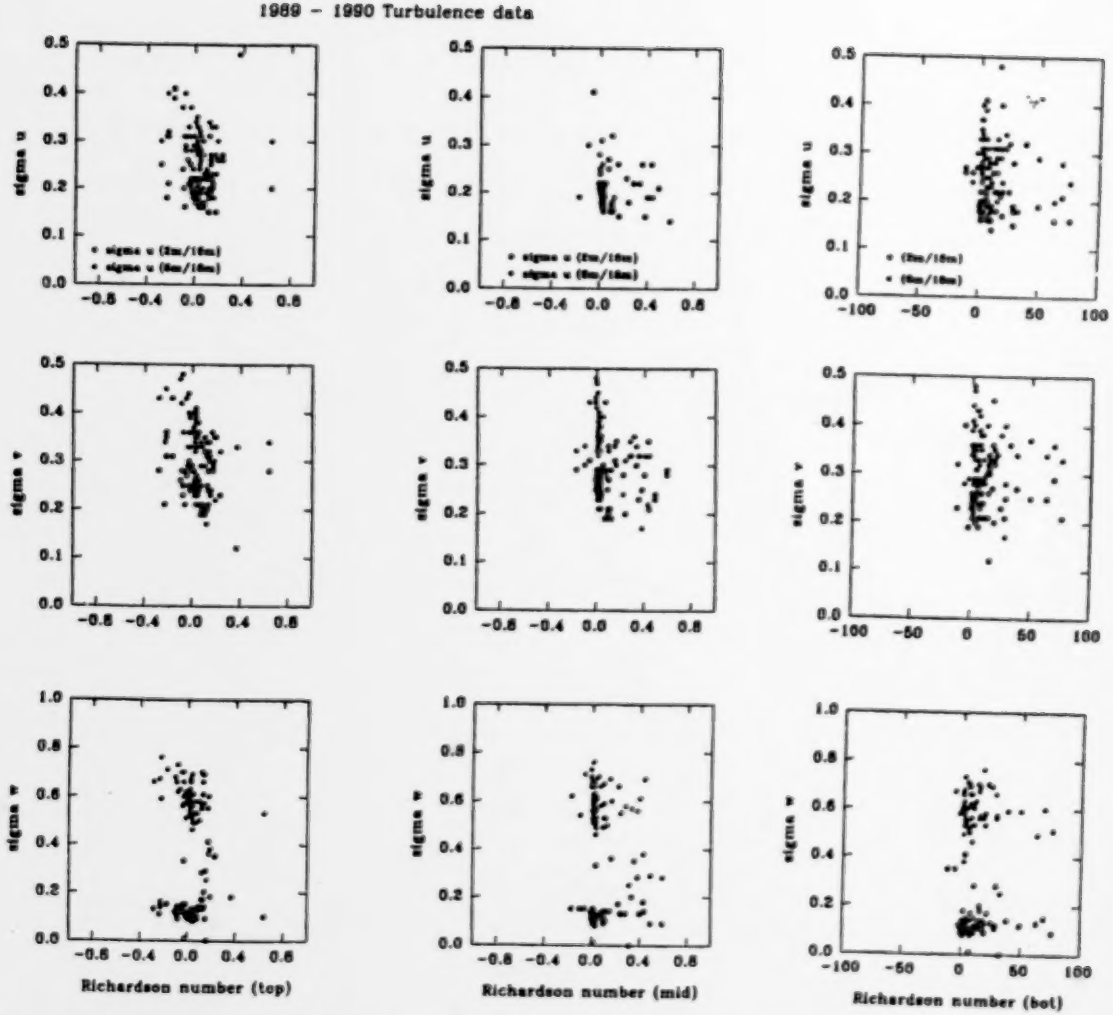

Figure 2. The standard deviation of streamwise (sigma u), crosswind (sigma v) and vertical (sigma w) velocities as functions of the Richardson number calculated between the top (18-12 m), mid (12-6 m) and bottom (6-2 m) measurement levels. The units of the standard deviations are m/s, and the Richardson number is unitless. Open circles are the 2-m height normalised by the 18-m height, and closed circles are the 6-m height normalised by the 18-m height.

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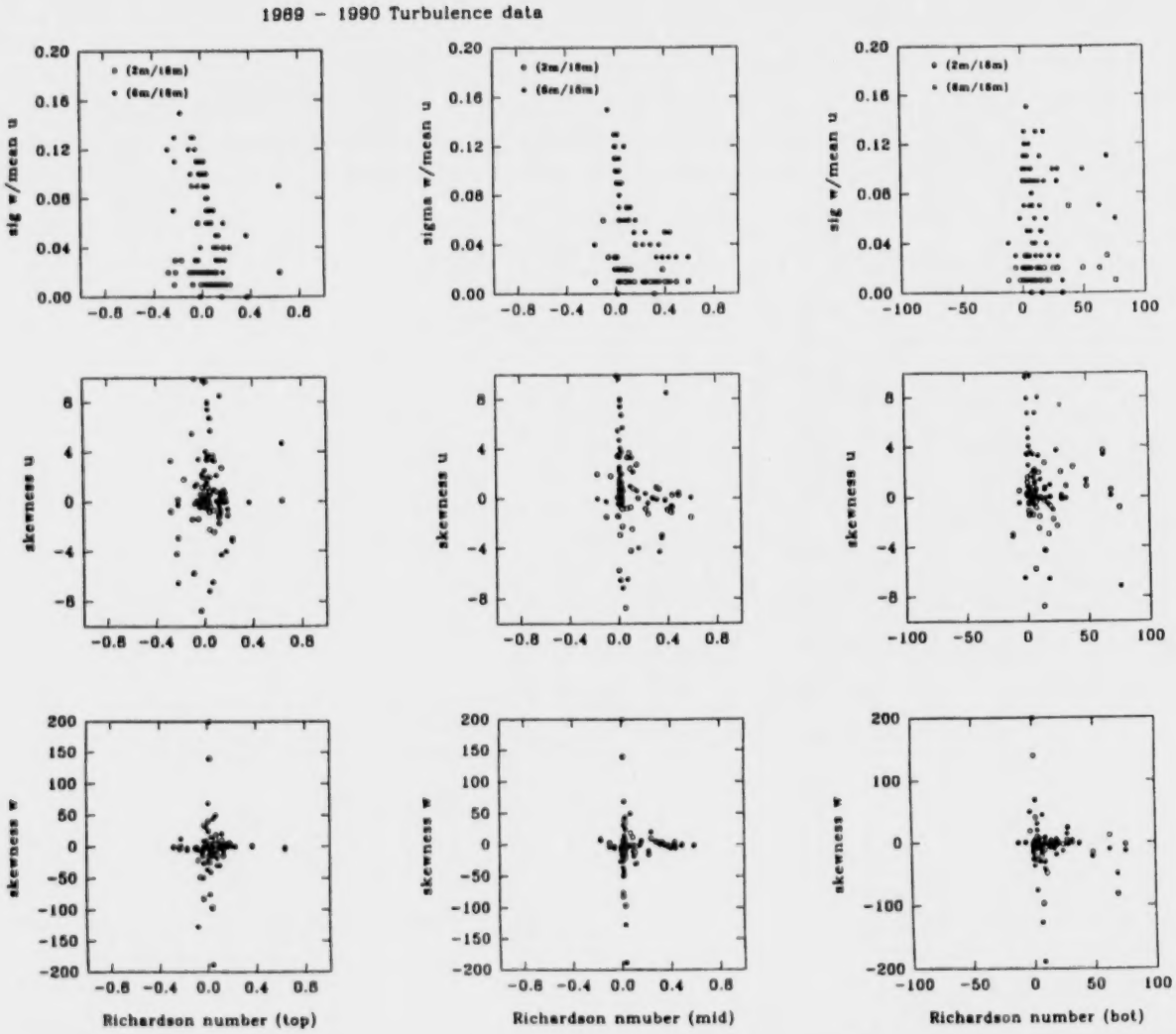

Figure 3. The turbulence intensity (sigma w/mean u), skewness of u, and skewness of w as functions of the Richardson number calculated between the top (18-12 m), mid (12-6 m) and bottom (6-2 m) measurement levels. All quantities are unitless. Open circles are the 2-m height normalised by the 18-m height, and closed circles are the 6-m height normalised by the 18-m height.

TR-784
COG-97-249-I

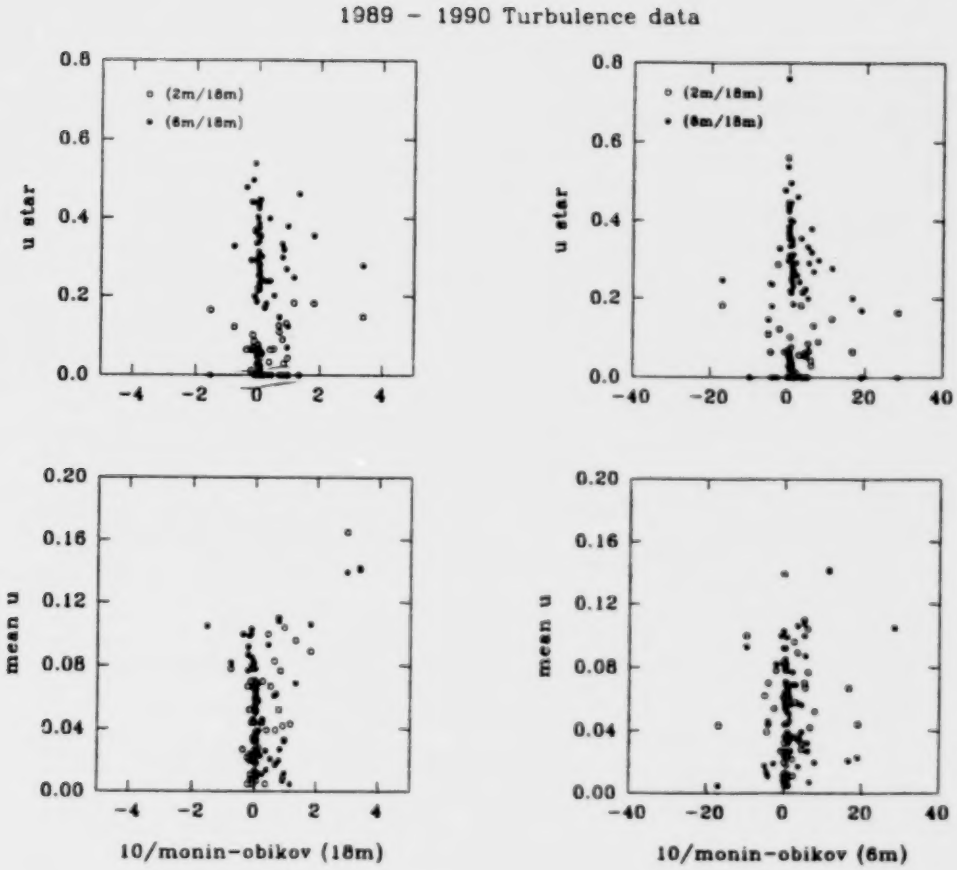

Figure 4. The friction velocity, u star (u_*), and mean u as functions of the inverse of the Monin-Obukov length number times 10 calculated above the top (18 m) and within the canopy (6 m). The units of u star and mean u are m/s, and the Monin-Obukov length has units of m. Open circles are the 2-m height normalised by the 18-m height, and closed circles are the 6-m height normalised by the 18-m height.

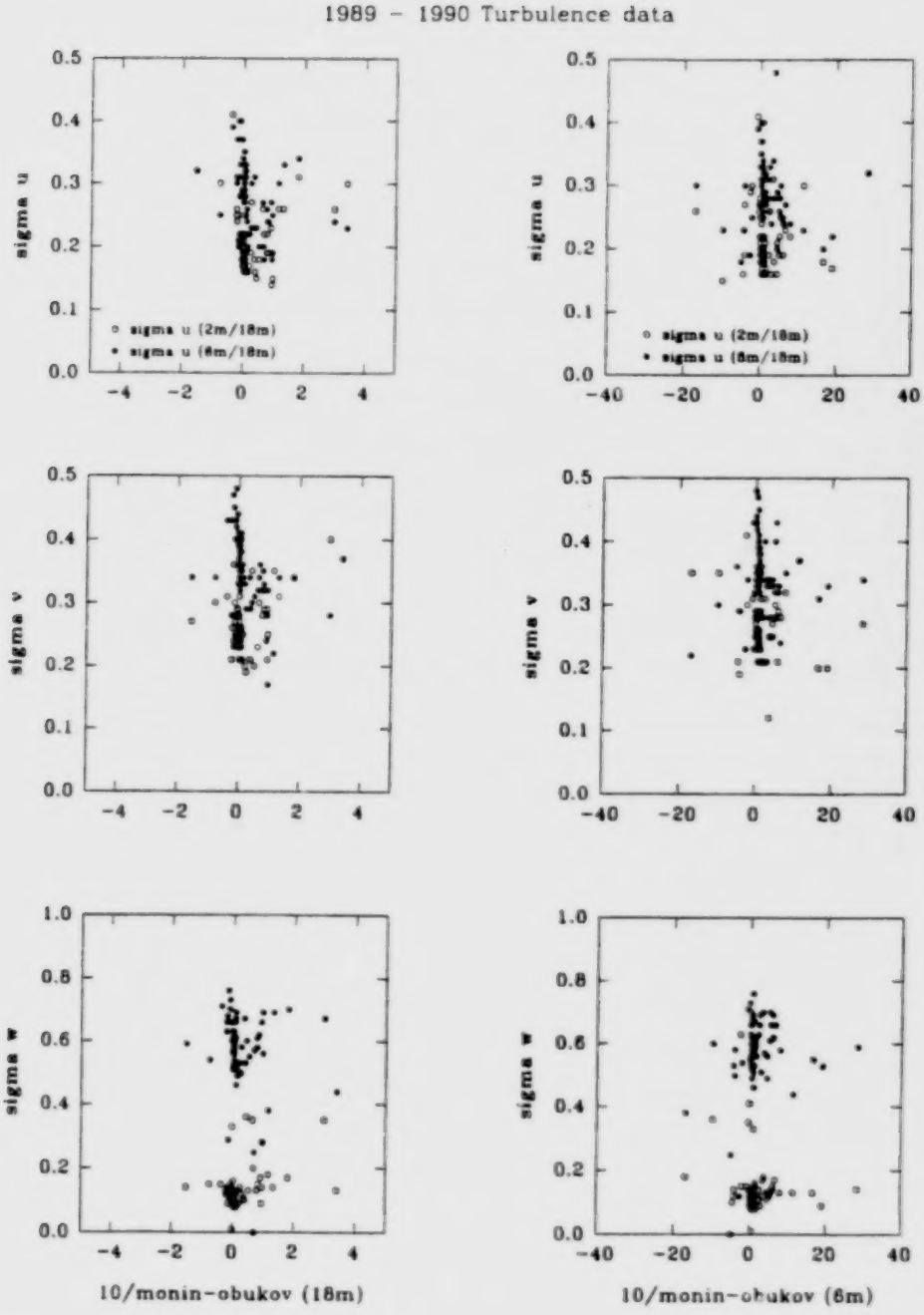

Figure 5. The standard deviation of streamwise (sigma u), crosswind (sigma v) and vertical (sigma w) velocities as functions of the inverse of the Monin-Obukov length number times 10 calculated above the top (18 m) and within the canopy (6 m). The units of the standard deviations are m/s, and the Monin-Obukov length has units of m. Open circles are the 2-m height normalised by the 18-m height, and closed circles are the 6-m height normalised by the 18-m height.

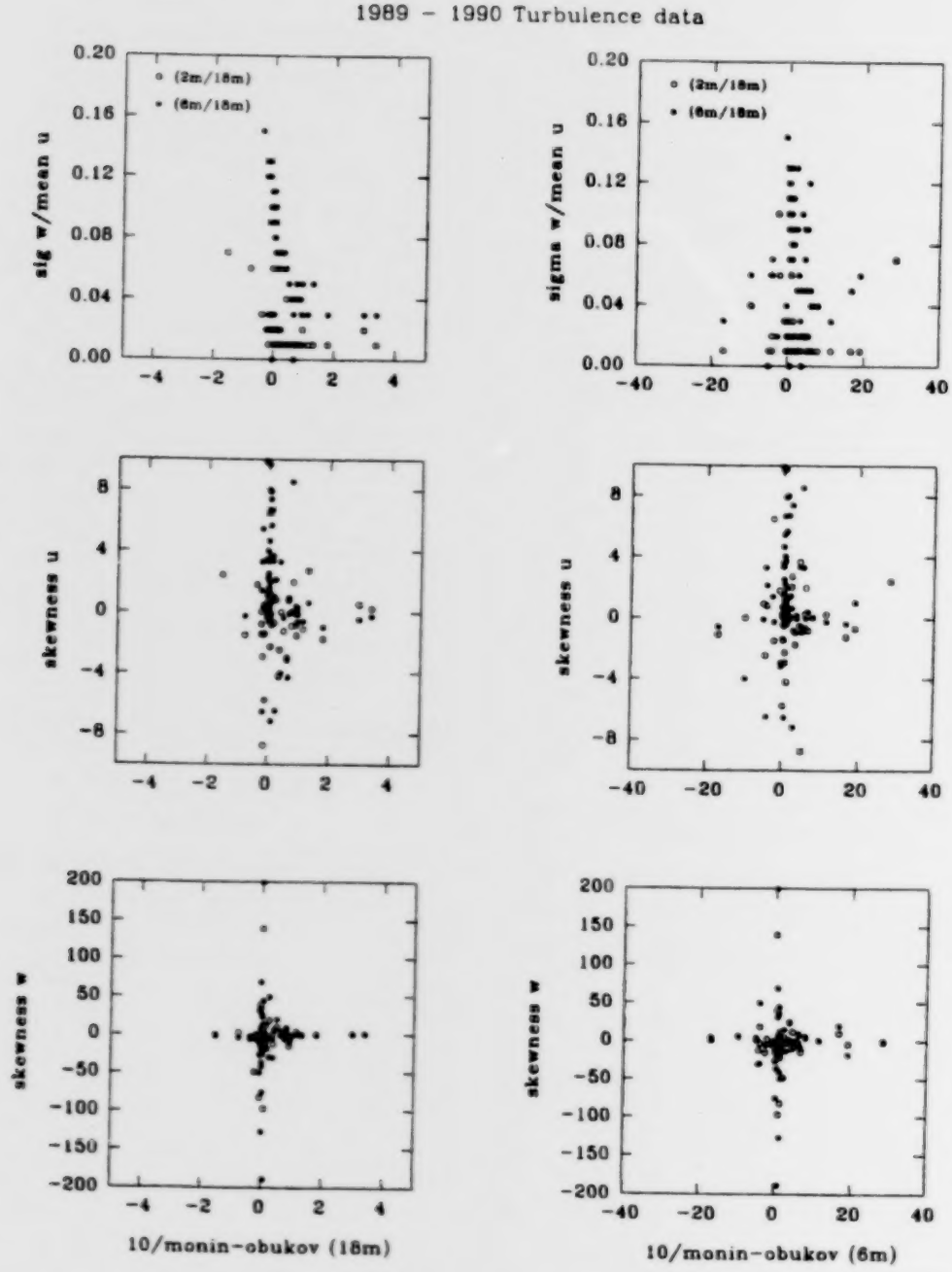

Figure 6. The turbulence intensity (sigma w/mean u), skewness of u, and skewness of w as functions of the inverse of the Monin-Obukov length number times 10 calculated above the top (18 m) and within the canopy (6 m). All quantities on the vertical axis are unitless, but the Monin-Obukov length has units of m. Open circles are the 2-m height normalised by the 18-m height, and closed circles are the 6-m height normalised by the 18-m height.

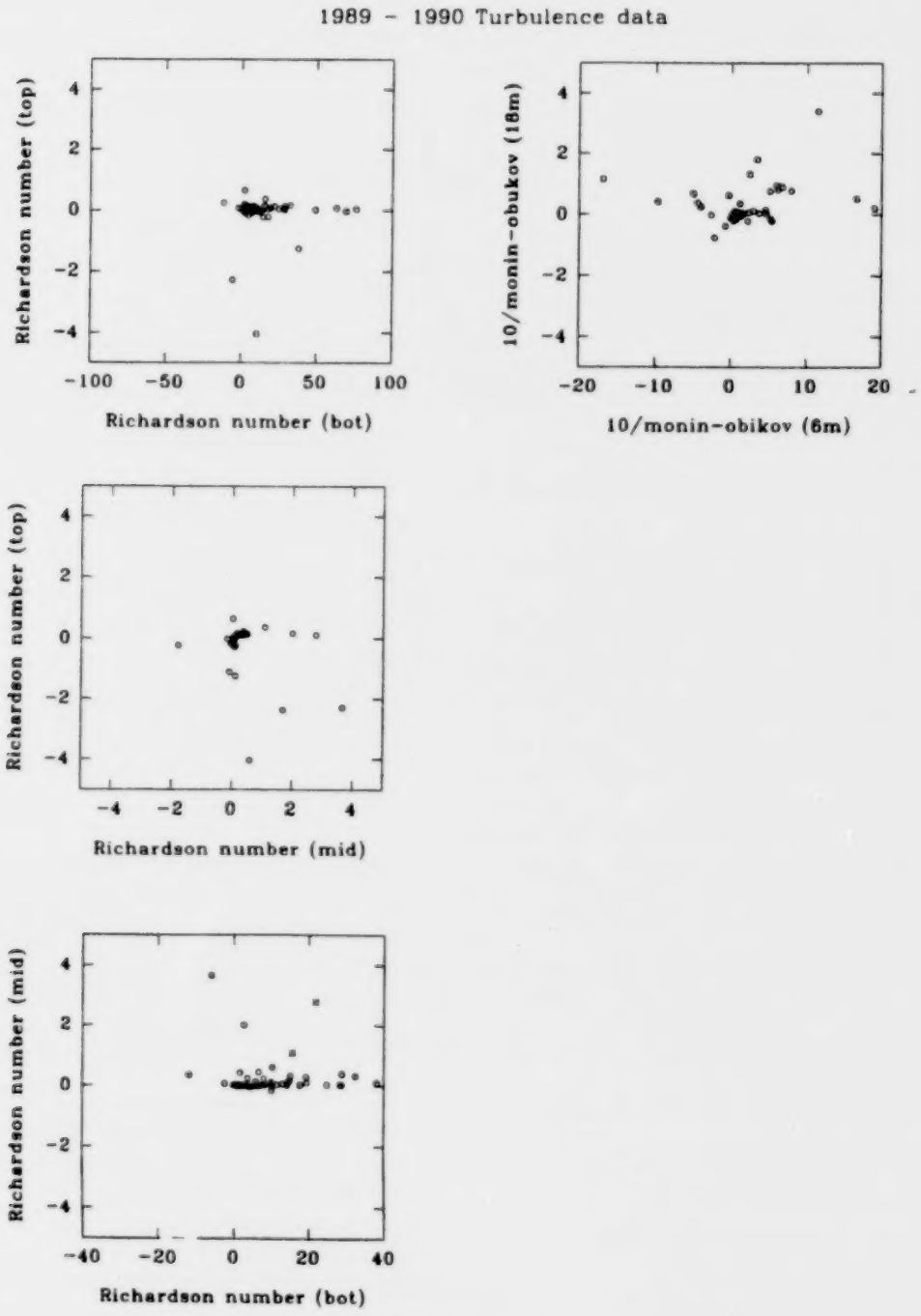

Figure 7. Plots of the Richardson numbers calculated at different heights, and the inverse of the Monin-Obukov length times 10 at different heights. The Richardson numbers are unitless whereas the Monin-Obukov length has units of m.

APPENDIX A

STATISTICS OF RUNS

The mean statistics for each run are given. The following codes and units are used.

RUN: identifies the date and run number, consistent with Table 1.
YEAR, etc.: identifies the data and time of the run. Note that year should be 89 or 90, not 91.
No. of records: gives the length of the data set. By dividing the number by 5 samples per second, one can calculate the length of the run in seconds.
Location: gives the height or instrument location. Propeller anemometers were at heights of 18 m and 12 m, three-dimensional sonic anemometers were at heights of 6 m and 2 m, one-dimensional anemometers were at a 6 m height labelled as Campbell Sonics N (north) and S (south), and Fast Thermo refers to a fine-wire thermocouple at 18 m.
WIND DIRECTIONS: given in radians and degrees from north.
MEANS: mean values in units of m/s for wind velocities in the streamwise (U), crosswind (V), and vertical (W) directions, and temperature (T) in °C.
SIGMAS: the standard deviation of the lateral wind direction (THETA in radians), the vertical wind direction (PHI in radians), the streamwise wind velocity (U in m/s), crosswind wind velocity (V in m/s), vertical wind velocity (W in m/s), and temperature (T in °C).
SKEWNESS: the skewness of the data for the streamwise wind velocity (U), crosswind wind velocity (V), vertical wind velocity (W), and temperature (T).
KURTOSIS: the kurtosis of the data for the streamwise wind velocity (U), crosswind wind velocity (V), vertical wind velocity (W), and temperature (T).
Means of primes: the triple products of the fluctuations in wind velocities ($[m/s]^3$), where U is streamwise velocity, V is crosswind velocity and W is vertical velocity.
Momentum flux: the momentum flux in units of Pa.
Mon-Obukov: is the Monin-Obukov length in units of m.
Heat flux: is the sensible heat flux in units of W/m^2.
U*: is the friction velocity in units of m/s; the symbol "S" indicates that the sign was changed because the calculation gave a negative value.
RAW DATA values: gives the maximum and minimum values of the raw data logged for each of the sixteen channels of the datalogger.

RUN: JULY31B.fvf;1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIN	HCNMS	FILT
91	7	31	11	47	0	1	16	0

No. of records: 9018

Location	10m	12m	6m	3m	Campbell W	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	4.876	3.717	4.699	3.353			
Degrees:	149.401	67.961	59.214	332.091			
MEANS:							
U:	2.321	1.364	0.090	0.065			
V:	0.2858-05	-.1158-050	.916E-080	.658E-07			
W:	0.069	0.007	0.001	0.002	0.071	-0.019	
T:			20.172				-2.851
SIGMAS:							
THETA:	0.248	0.363	2.169	2.209			
PHI:	0.142	0.190	1.784	0.653			
U:	0.798	0.747	0.156	0.130			
V:	0.576	0.495	0.194	0.144			
W:	0.330	0.259	0.161	0.062	0.195	0.092	
T:			0.231				0.593
SKEWNESS:							
U:	0.243	0.642	0.819	0.892			
V:	0.473	0.642	-0.130	-0.477			
W:	0.033	-0.237	-0.3650	.378E-00	-1.267	0.211	
T:			0.709				0.334
Kurtosis:							
U:	3.346	3.151	7.504	5.474			
V:	3.308	3.735	5.046	3.924			
W:	3.319	3.909	3.879	4.653	3.909	4.219	
T:			3.518				3.176
Means of prime:	10m	12m	6m	3m			
UVW:	0.170E-01	0.215E-01	-0.144E-03	0.486E-04			
UUW:	-0.136E-01	-0.235E-00	-0.372E-03	0.217E-04			
VVW:	-0.806E-02	-0.661E-02	-0.212E-02	0.921E-05			
VVU:	0.165E-01	0.513E-02	0.177E-03	-0.423E-04			
UVV:	0.108E-00	0.814E-01	0.889E-03	0.150E-03			
UUV:	0.167E-01	-0.269E-01	-0.152E-02	0.194E-04			
UVU:	-0.143E-01	-0.530E-03	0.511E-03	0.339E-04			
Momentum flux:	0.112E+00	0.111E+00	0.303E-03	-0.690E-03			
Non-Obukov:	0.676E+02		-0.168E+00				
Heat flux:	-38.366		3.195				
U*:	0.309	0.308	0.016	0.0241	S-Sign changed		

RAW DATA values:

MAX:	2.6230	5.7170	1.6350	0.3250	3.2210	1.1860	1.0390	1.3680
	0.3940	21.3700	0.3700	0.4380	0.2480	0.5890	0.4090	-0.8770
MIN:	-1.1360	-0.0150	-1.2240	-4.2690	-0.5490	-1.5600	-1.3320	-0.5190
	-0.8580	19.6500	-0.7210	-0.5630	-0.1960	-1.1770	-0.7250	-4.0890

RUN: JULY31C.fvf;1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIN	HCNMS	FILT
91	7	31	23	29	4	1	16	0

No. of records: 8443

Location	10m	12m	6m	3m	Campbell W	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	5.096	3.993	5.311	2.184			
Degrees:	161.954	85.792	185.759	283.120			
MEANS:							
U:	1.930	1.109	0.021	0.085			
V:	-.3958-05	-.330E-07	.306E-080	.922E-07			
W:	0.049	0.010	0.001	0.010	0.094	-0.059	
T:			19.612				-3.372
SIGMAS:							
THETA:	0.259	0.381	6.672	1.128			
PHI:	0.141	0.177	6.329	0.440			
U:	0.598	0.569	0.137	0.111			
V:	0.500	0.422	0.143	0.096			
W:	0.273	0.196	0.136	0.037	0.134	0.078	
T:			0.239				0.350
SKEWNESS:							
U:	0.250	0.699	0.623	0.234			
V:	-0.037	-0.136	-0.020	0.223			
W:	0.029	-0.263	-0.861	-.892E-01	-1.540	0.003	
T:			0.602				0.389
Kurtosis:							
U:	3.840	3.491	6.497	3.990			
V:	3.253	3.095	7.519	3.606			
W:	3.042	4.373	5.021	3.699	11.550	3.712	
T:			3.872				2.694
Means of prime:	10m	12m	6m	3m			
UVW:	0.579E-02	0.999E-02	0.117E-02	0.387E-04			
UUW:	-0.205E-01	-0.900E-01	-0.309E-03	0.149E-05			
VVW:	0.604E-02	-0.587E-03	-0.167E-02	-0.196E-04			
VVU:	0.297E-02	-0.106E-02	0.697E-03	-0.523E-05			
UVV:	0.607E-01	0.397E-01	0.347E-03	-0.640E-05			
UUV:	-0.169E-01	-0.223E-02	0.324E-03	0.398E-06			
UVU:	-0.848E-02	0.334E-02	-0.595E-03	0.122E-04			
Momentum flux:	0.458E-01	0.553E-01	0.235E-02	-0.532E-04			
Non-Obukov:	0.416E+02		0.306E+01				
Heat flux:	-16.321		-2.643				
U*:	0.198	0.217	0.047	0.0073	S-Sign changed		

RAW DATA values:

MAX:	2.4960	4.0360	1.0230	0.2870	3.0210	0.8130	1.2620	0.9160
	0.3640	20.7600	0.3430	0.3100	0.1620	0.5630	0.3660	-2.2780
MIN:	-0.6240	0.0370	-0.9110	-2.9460	-0.2500	-0.8610	-0.7860	-0.5570
	-0.8890	19.0300	-0.3930	-0.3380	-0.1680	-1.1710	-0.4070	-4.4480

RUN: AUG17A.fvf;1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIN	HCNMS	FILT
91	8	17	21	46	36	1	16	0

No. of records: 9013

Location	10m	12m	6m	3m	Campbell W	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	4.848	3.025	5.885	4.394			
Degrees:	147.771	142.885	127.198	31.749			
MEANS:							
U:	4.039	2.644	0.228	0.147			
V:	-.380E-08	-.247E-05	-.115E-06	-.127E-06			
W:	0.105	0.037	0.013	-0.001	0.256	0.006	
T:			20.817				-2.828
SIGMAS:							
THETA:	0.267	0.365	1.661	1.859			
PHI:	0.163	0.219	1.363	0.500			
U:	1.484	1.421	0.442	0.272			
V:	1.086	0.973	0.379	0.273			
W:	0.664	0.583	0.356	0.073	0.318	0.234	
T:			0.180				0.601
SKEWNESS:							
U:	0.373	0.721	1.346	0.013			
V:	0.228	0.098	0.396	-0.230			
W:	0.017	-0.224	-1.290	-.427E-00	-1.159	-0.661	
T:			0.755				0.485
Kurtosis:							
U:	2.734	3.592	7.864	4.048			
V:	3.269	3.428	7.101	3.666			
W:	3.470	3.528	6.729	6.126	6.856	6.080	
T:			6.444				2.301
Means of prime:	10m	12m	6m	3m			
UVW:	0.936E-01	0.117E-00	0.380E-01	0.357E-04			
UUW:	-0.134E-01	-0.687E-01	-0.216E-00	-0.700E-03			
VVW:	0.574E-01	0.230E-01	-0.139E-01	-0.401E-03			
VVU:	0.685E-01	0.944E-02	0.137E-01	-0.302E-03			
UVV:	0.180E+01	0.154E+01	-0.363E-01	0.899E-04			
UUV:	-0.157E-01	-0.211E-01	0.134E-01	-0.324E-03			
UVU:	-0.265E-01	-0.354E-01	-0.899E-04	-0.359E-03			
Momentum flux:	0.430E-00	0.443E+00	0.537E-01	-0.303E-02			
Non-Obukov:	0.338E+01		0.563E+02				
Heat flux:	-50.189		-15.405				
U*:	0.687	0.618	0.315	0.0423	S-Sign changed		

RAW DATA values:

MAX:	5.2530	9.8300	3.7190	4.3550	9.1800	2.4080	3.5280	2.7810
	1.3290	21.0400	0.9760	1.9150	0.4640	1.3130	1.0230	-1.0840
MIN:	-2.4340	-0.1120	-1.9830	-1.9590	-0.3630	-2.6700	-1.3550	-2.9630
	-2.6950	20.4600	-1.1340	-0.9460	-0.4910	-3.3000	-1.7540	-4.0630

RUN: AUG17B.fvf;1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIN	HCNMS	FILT
91	8	17	22	30	56	1	16	0

No. of records: 8757

Location	10m	12m	6m	3m	Campbell W	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	5.005	3.227	6.083	3.850			
Degrees:	156.784	134.478	138.522	0.564			
MEANS:							
U:	3.738	2.365	0.215	0.100			
V:	-.658E-05	-.154E-05	.314E-070	.515E-07			
W:	0.118	0.039	-0.002	-0.001	0.699	0.013	
T:			20.367				1.724
SIGMAS:							
THETA:	0.275	0.398	1.675	2.367			
PHI:	0.186	0.230	1.794	0.731			
U:	1.308	1.276	0.456	0.268			
V:	1.032	0.941	0.360	0.236			
W:	0.616	0.543	0.365	0.073	0.279	0.232	
T:			0.184				0.492
SKEWNESS:							
U:	0.086	0.645	1.706	0.134			
V:	0.146	-0.063	0.454	0.309			
W:	-0.009	-0.181	-1.782	-.125E-01	-0.812	-1.075	
T:			-0.039				0.372
Kurtosis:							
U:	2.540	2.834	10.660	3.573			
V:	3.214	3.437	7.363	4.037			
W:	3.177	3.627	9.161	10.160	5.294	5.811	
T:			3.810				2.480
Means of prime:	10m	12m	6m	3m			
UVW:	0.301E-01	0.918E-01	0.810E-01	0.298E-03			
UUW:	-0.145E-00	-0.202E-01	-0.604E-00	0.912E-04			
VVW:	0.633E-01	-0.723E-01	-0.393E-01	-0.208E-03			
VVU:	0.259E-01	-0.189E-01	-0.512E-02	0.287E-03			
UVV:	0.348E+00	0.194E-01	0.371E-02	0.184E-02			
UUV:	0.354E+00	-0.227E-00	-0.144E-00	0.211E-02			
UVU:	-0.236E-01	0.430E-02	0.245E-01	-0.220E-03			
Momentum flux:	0.420E+00	0.387E+00	0.709E-01	0.193E-02			
Non-Obukov:	0.338E+01		0.669E+02				
Heat flux:	-35.148		-22.981				
U*:	0.599	0.576	0.260	0.041	S-Sign changed		

RAW DATA values:

MAX:	4.7160	7.8300	2.3330	5.0780	7.8200	3.4830	4.2680	2.6200
	1.3090	21.1500	0.8290	1.3700	0.3680	1.0350	0.7790	-2.2880
MIN:	-2.3080	0.0500	-2.4080	-1.5720	-0.8360	-2.4080	-1.5220	-2.3570
	-3.6430	19.9420	-0.9530	-0.7730	-0.7050	-1.9380	-1.0430	-4.8170

RUN: AUG23A.fvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	NCRNS	FILT
91	8	23	20	56	37	1	16	0

No. of records: 9052

Location	1Bn	1Zn	0n	2n	Campbell M	Sonics S	Foat Thermo
WIND DIRECTIONS:							
Radians:	4.395	4.618	5.635	4.806			
Degrees:	121.827	119.569	112.888	55.384			
MEANS:							
U:	2.947	1.873	0.169	0.076			
V:	-.203E-050	.131E-060	.458E-08	-.283E-07			
W:	0.045	0.041	-0.003	0.005	0.040	-0.003	
T:			20.899				-3.384
SIGMAS:							
TRETA:	0.229	0.286	1.457	2.187			
PHI:	0.146	0.189	1.232	0.449			
U:	0.966	0.889	0.254	0.152			
V:	0.674	0.536	0.266	0.167			
W:	0.430	0.354	0.211	0.034	0.228	0.121	
T:			0.184				0.581
SKEWNESS:							
U:	0.161	0.486	1.081	0.137			
V:	-0.137	-0.027	0.140	0.086			
W:	0.264	-0.222	-1.419	-.261E+00	-1.144	-0.132	
T:			0.545				0.626
Kurtosis:							
U:	2.895	3.142	7.892	3.305			
V:	3.083	3.858	7.178	2.860			
W:	3.329	3.720	8.199	3.191	6.499	3.512	
T:			3.804				2.631

Means of primes:	1Bn	1Zn	0n	2n
UVW:	0.153E-01	0.478E-02	0.814E-02	0.797E-05
UUV:	-0.115E+00	-0.239E+00	-0.147E-01	-0.644E-05
VVU:	-0.198E-01	-0.566E-02	-0.765E-02	0.373E-04
VVW:	0.622E-02	-0.677E-04	0.520E-02	-0.241E-05
UVV:	0.234E+00	0.159E+00	0.990E-02	-0.511E-04
UUV:	-0.795E-01	-0.173E+00	0.200E-01	0.802E-04
UUW:	-0.125E-01	0.434E-02	-0.642E-02	0.246E-04

Momentum flux:	0.163E+00	0.161E+00	0.149E-01	-0.895E-05
Non-Obukov:	0.839E+02		0.211E+02	
Heat flux:	-55.733		-5.991	
U*:	0.376	0.371	0.113	0.0035

RAW DATA values:									
MAX:	1.0230	6.1880	2.1950	1.5340	5.4010	1.3600	2.5900	1.3990	
	0.5360	21.7500	0.6170	0.6850	0.1220	1.3040	0.3850	-1.3870	
MIN:	-3.5050	0.1870	-1.2850	-2.3460	-0.0370	-1.5590	-1.1330	-1.1270	
	-1.7260	20.4600	-0.4970	-0.3670	-0.1660	-1.3850	-0.5850	-4.5640	

RUN: AUG23B.fvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	NCRNS	FILT
91	8	23	21	27	39	1	16	0

No. of records: 9135

Location	1Bn	1Zn	0n	2n	Campbell M	Sonics S	Foat Thermo
WIND DIRECTIONS:							
Radians:	4.635	4.682	5.522	4.320			
Degrees:	135.253	122.170	106.616	27.510			
MEANS:							
U:	2.933	1.822	0.134	0.071			
V:	0.442E-060	.245E-060	.232E-060	.130E-07			
W:	0.033	0.049	0.003	0.001	0.001	0.011	
T:			20.677				-4.032
SIGMAS:							
TRETA:	0.232	0.321	2.135	2.486			
PHI:	0.150	0.201	1.805	0.551			
U:	0.933	0.909	0.229	0.173			
V:	0.682	0.584	0.262	0.176			
W:	0.441	0.365	0.205	0.039	0.223	0.134	
T:			0.160				0.232
SKEWNESS:							
U:	0.469	0.679	0.310	-0.030			
V:	-0.190	-0.021	0.149	0.149			
W:	0.004	-0.108	-1.331	.584E+00	-1.189	-0.308	
T:			0.561				0.122
Kurtosis:							
U:	3.073	3.481	6.403	2.937			
V:	3.339	3.818	4.751	2.934			
W:	2.943	3.366	7.633	5.562	5.962	4.790	
T:			3.854				2.965

Means of primes:	1Bn	1Zn	0n	2n
UVW:	0.388E-01	0.234E-01	0.669E-02	-0.119E-04
UUV:	-0.423E-00	-0.574E+00	-0.520E-02	-0.313E-04
VVU:	0.114E-01	-0.676E-02	-0.475E-02	-0.388E-04
VVW:	-0.748E-02	-0.378E-02	0.493E-02	-0.465E-04
UVV:	0.225E+00	0.131E+00	0.145E-02	0.240E-04
UUV:	0.328E-01	0.881E-00	0.550E-02	0.410E-04
UUW:	0.480E-02	0.302E-03	-0.291E-03	-0.209E-04

Momentum flux:	0.147E+00	0.132E+00	0.884E-02	-0.406E-04					
Non-Obukov:	0.112E+03		0.118E+02						
Heat flux:	-35.035		-4.914						
U*:	0.355	0.361	0.087	0.0065					
RAW DATA values:									
MAX:	0.9850	6.3480	1.7090	1.9090	5.8750	1.3730	1.8590	1.2690	
	0.9350	21.5500	0.6440	0.6330	0.1490	0.7430	0.3290	-3.1200	
MIN:	-3.0310	0.4860	-1.7340	-1.9960	-0.0130	-1.3470	-0.9380	-1.9080	
	-1.5780	20.1900	-0.6170	-0.5350	-0.3430	-1.3650	-0.8360	-4.8490	

RUN: AUG23C.fvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	NCRNS	FILT
91	8	23	22	7	44	1	16	0

No. of records: 8523

Location	1Bn	1Zn	0n	2n	Campbell M	Sonics S	Foat Thermo
WIND DIRECTIONS:							
Radians:	4.497	4.704	5.631	4.440			
Degrees:	127.643	124.526	113.762	54.370			
MEANS:							
U:	2.946	1.891	0.149	0.095			
V:	-.277E-05	.842E-070	.136E-06	-.384E-07			
W:	-0.002	0.036	-0.007	0.003	0.067	0.007	
T:			20.409				-3.914
SIGMAS:							
TRETA:	0.224	0.307	1.680	1.779			
PHI:	0.150	0.196	1.573	0.415			
U:	0.955	0.936	0.263	0.169			
V:	0.659	0.580	0.250	0.169			
W:	0.441	0.370	0.234	0.039	0.234	0.137	
T:			0.163				0.375
SKEWNESS:							
U:	0.382	0.512	0.735	-0.148			
V:	-0.137	0.072	-0.128	-0.235			
W:	-0.027	-0.108	-1.205	-.128E+00	-1.442	-0.180	
T:			0.815				0.643
Kurtosis:							
U:	2.971	3.118	6.304	3.272			
V:	3.307	4.745	6.648	3.136			
W:	2.894	3.465	7.439	4.237	7.291	4.785	
T:			3.805				3.082

Means of primes:	1Bn	1Zn	0n	2n
UVW:	0.204E-01	0.210E-01	0.108E-01	0.365E-05
UUV:	-0.490E+00	-0.513E+00	-0.140E-01	-0.167E-05
VVU:	0.790E-02	-0.120E-01	-0.755E-02	-0.986E-04
VVW:	-0.375E-03	0.932E-03	0.682E-02	-0.364E-04
UVV:	-0.754E-02	0.138E+00	0.422E-02	-0.540E-04
UUV:	0.190E-00	0.249E+00	0.100E-01	-0.165E-03
UUW:	-0.116E-02	-0.169E-01	-0.617E-02	0.118E-04

Momentum flux:	0.186E+00	0.195E+00	0.148E-01	-0.265E-04					
Non-Obukov:	0.165E+03		0.969E+01						
Heat flux:	-33.825		-12.864						
U*:	0.399	0.408	0.112	0.0035					
RAW DATA values:									
MAX:	1.4720	6.2870	1.5340	3.3560	6.4500	1.3330	2.3460	1.3190	
	0.8610	21.2500	0.5630	0.6630	0.1970	1.1340	0.4950	-2.6740	
MIN:	-3.6700	0.2990	-1.5340	-2.1080	-0.2500	-1.6390	-1.1630	-1.2580	
	-1.9300	20.0200	-0.5920	-0.5380	-0.1960	-1.9940	-1.0080	-4.9180	

RUN: AUG24A.fvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	NCRNS	FILT
91	8	24	21	16	40	1	16	0

No. of records: 8948

Location	1Bn	1Zn	0n	2n	Campbell M	Sonics S	Foat Thermo
WIND DIRECTIONS:							
Radians:	4.947	5.184	6.042	4.327			
Degrees:	153.640	152.038	136.188	27.914			
MEANS:							
U:	4.311	2.775	0.276	0.052			
V:	-.248E-05	-.253E-050	.384E-06	.723E-07			
W:	0.137	0.107	0.020	0.006	0.134	0.048	
T:			21.384				-3.734
SIGMAS:							
TRETA:	0.277	0.373	1.479	5.376			
PHI:	0.170	0.233	1.599	1.318			
U:	1.330	1.468	0.506	0.295			
V:	1.193	1.035	0.406	0.269			
W:	0.735	0.646	0.438	0.089	0.315	0.270	
T:			0.096				0.443
SKEWNESS:							
U:	0.151	0.394	1.461	0.033			
V:	0.106	0.095	0.823	-0.139			
W:	0.276	-0.101	-1.539	-.343E-00	-1.477	-0.860	
T:			0.411				0.644
Kurtosis:							
U:	2.753	2.965	8.741	3.643			
V:	3.411	3.653	7.213	4.161			
W:	3.363	3.779	7.929	4.695	12.239	6.232	
T:			3.525				2.843

Means of primes:	1Bn	1Zn	0n	2n
UVW:	-0.657E-02	0.117E+00	0.101E+00	0.106E-03
UUV:	-0.752E+00	-0.469E+01	-0.696E+00	-0.801E-03
VVU:	0.134E+00	-0.175E-01	-0.382E-01	0.485E-05
VVW:	-0.432E-01	0.369E-01	0.568E-03	-0.946E-04
UVV:	0.311E+01	0.474E-01	-0.305E-01	-0.128E-02
UUV:	-0.352E+01	-0.324E+01	-0.174E-01	0.429E-03
UUW:	0.365E-01	0.189E-02	0.233E-01	-0.101E-03

Momentum flux:	0.465E+00	0.492E+00	0.833E-01	-0.412E-03					
Non-Obukov:	0.507E+03		0.790E+02						
Heat flux:	-43.641		-21.337						
U*:	0.631	0.650	0.268	0.0191					
RAW DATA values:									
MAX:	5.3750	9.3600	3.8170	4.3330	9.3600	2.8810	4.1570	2.0590	
	1.4070	22.0000	1.3120	1.4920	0.3500	1.3470	1.0190	-2.1560	
MIN:	-2.7940	-0.2240	-2.7320	-1.6090	-0.3870	-3.0680	-2.4370	-1.0760	
	-2.9930	20.9900	-1.1900	-1.1030	-0.4540	-3.2300	-1.9680	-4.7510	

RUN: AUG24B.fvfil

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIN	NCRMS	FILT
91	8	24	21	49	52	1	16	0

No. of records: 9067

Location	10m	12m	4m	2m	Campbell M	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	4.846	5.073	6.074	6.250			
Degrees:	147.639	145.639	138.020	23.494			
MEANS:							
U:	3.979	2.637	0.231	0.080			
V:	-.5482E-06	-.2688E-05	-.1522E-06	-.8468E-07			
W:	0.057	0.034	-0.001	0.003	0.122	0.030	
T:			20.998				-4.284
SIGMAS:							
TRETA:	0.263	0.366	1.635	3.377			
PHI:	0.161	0.212	1.659	0.858			
U:	1.426	1.293	0.466	0.260			
V:	1.047	0.966	0.377	0.272			
W:	0.641	0.560	0.383	0.069	0.295	0.226	
T:			0.191				0.249
SKEWNESS:							
U:	0.336	0.483	1.835	0.177			
V:	0.046	0.062	0.573	0.119			
W:	0.135	-0.127	-1.696	-.923E-00	-0.815	-0.449	
T:			0.019				0.195
Kurtosis:							
U:	3.325	3.565	12.973	3.203			
V:	3.453	3.531	6.310	3.032			
W:	3.255	3.634	8.887	8.036	5.099	4.663	
T:			3.329				3.058

Means of primes:	10M	12M	4M	2M
UVV:	0.7968-01	0.1068-00	0.7228-01	0.3358-04
UUV:	-0.1788+01	-0.3608+01	-0.6848+00	-0.4908-03
VVV:	0.2858-01	-0.6178-01	-0.3068-01	-0.2928-03
VVU:	-0.2408-01	0.5628-02	0.7708-01	-0.1198-03
UVV:	0.2258+01	0.2608+01	-0.5718-02	0.7938-03
UUV:	0.6828-00	-0.5578+00	0.1338-01	0.4178-03
UVU:	0.1238-01	-0.2538-01	0.1488-01	-0.2688-03

Momentum flux:	0.3388+00	0.3758+00	0.6728-01	-0.1318-03
Non-Obukov:	0.3428+03		0.6588+02	
Heat flux:	-40.101		-18.438	
U*:	0.538	0.567	0.240	0.0118

3=Sign changed

RAV DATA values:

MAX:	5.8490	9.3600	3.7810	6.2480	8.5500	2.3940	3.7930	2.0600
	1.0560	21.9000	1.0030	1.1030	0.3240	1.0600	0.9010	-3.2620
MIN:	-3.3800	-0.0620	-1.6810	-2.3960	-0.6380	-2.5320	-1.4700	-3.4730
	-2.8080	20.4900	-0.9730	-0.6710	-0.6070	-1.7910	-1.2550	-5.1010

RUN: AUG24C.fvfil

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIN	NCRMS	FILT
91	8	24	22	51	36	1	16	0

No. of records: 9122

Location	10m	12m	4m	2m	Campbell M	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	4.997	5.211	6.093	6.264			
Degrees:	154.283	153.350	139.150	12.824			
MEANS:							
U:	4.161	2.573	0.223	0.111			
V:	-.6984E-05	-.1948E-050	.265E-070	.206E-06			
W:	0.098	0.068	0.011	0.001	0.101	0.047	
T:			20.215				-3.906
SIGMAS:							
TRETA:	0.375	0.386	1.758	2.321			
PHI:	0.165	0.241	1.892	0.640			
U:	1.413	1.342	0.469	0.276			
V:	1.146	0.993	0.393	0.258			
W:	0.685	0.619	0.423	0.071	0.332	0.250	
T:			0.169				0.434
SKEWNESS:							
U:	0.333	0.543	1.123	0.050			
V:	0.036	0.140	0.711	-0.029			
W:	0.229	-0.137	-1.755	-.245E-00	-1.098	-0.535	
T:			0.073				0.569
Kurtosis:							
U:	2.908	3.138	7.032	3.225			
V:	3.472	3.207	7.619	3.566			
W:	3.115	3.646	9.229	4.654	4.039	4.863	
T:			3.002				2.920

Means of primes:	10M	12M	4M	2M
UVV:	0.3478-01	0.1178-00	0.5638-01	0.2788-03
UUV:	-0.9038-00	-0.4508+01	-0.3468-00	-0.2698-03
VVV:	0.9938-01	-0.3538-01	-0.3068-01	-0.3798-03
VVU:	0.2888-01	0.3048-01	0.2758-02	0.8198-05
UVV:	0.6938-00	0.1558-01	-0.3088-01	0.3508-03
UUV:	0.6428-00	-0.1228-00	-0.7538-01	-0.7868-03
UVU:	-0.3958-01	-0.5088-01	0.2458-01	-0.2918-03

Momentum flux:	0.3968-00	0.4648-00	0.5868-01	0.3338-03
Non-Obukov:	0.4668+03		0.6318+02	
Heat flux:	-37.135		-22.824	
U*:	0.582	0.630	0.224	0.017

3=Sign changed

RAV DATA values:

MAX:	6.0630	9.0100	2.9440	6.1250	8.5800	3.1690	3.4920	2.0570
	1.3650	20.9000	0.7810	0.9400	0.3650	1.0910	0.9860	-2.3660
MIN:	-2.4830	0.1870	-2.3200	-1.9090	-1.1850	-2.7200	-2.5820	-3.1770
	-3.3730	19.6100	-1.2310	-1.0140	-0.4700	-1.9020	-1.9300	-5.0490

RUN: SEPT5A.fvfil

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIN	NCRMS	FILT
91	9	5	21	26	40	1	16	0

No. of records: 9033

Location	10m	12m	4m	2m	Campbell M	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	4.306	4.571	7.482	5.151			
Degrees:	116.714	116.897	218.708	75.141			
MEANS:							
U:	2.331	1.161	0.046	0.057			
V:	-.2518-050	.175E-050	.241E-07	.323E-07			
W:	-0.092	0.017	-0.004	0.009	-0.080	-0.053	
T:			13.696				-0.582
SIGMAS:							
TRETA:	0.163	0.208	1.938	1.606			
PHI:	0.100	0.096	1.487	0.383			
U:	0.437	0.383	0.087	0.091			
V:	0.380	0.741	0.088	0.091			
W:	0.232	0.111	0.068	0.022	0.068	0.036	
T:			0.555				0.815
SKEWNESS:							
U:	0.301	0.478	0.143	0.087			
V:	0.152	-0.266	0.216	0.436			
W:	0.126	0.006	-0.218	0.324E-01	-0.047	-0.049	
T:			0.436				0.227
Kurtosis:							
U:	2.989	3.171	3.137	3.333			
V:	3.255	3.593	3.259	2.938			
W:	2.390	3.969	2.964	3.837	3.219	3.054	
T:			3.283				2.883

Means of primes:	10M	12M	4M	2M
UVV:	0.3588-02	0.1678-02	0.6598-04	-0.1088-05
UUV:	-0.8568-02	-0.2298-02	0.1108-05	-0.1818-06
VVV:	-0.1848-02	-0.1378-02	-0.6638-04	0.3868-05
VVU:	0.3838-03	0.2718-03	0.4798-05	0.3058-05
UVV:	0.5028-02	0.2518-02	-0.2898-05	-0.4338-05
UUV:	0.1218-02	-0.1388-02	0.3458-05	-0.2928-05
UVU:	-0.7168-04	0.6448-03	-0.1848-04	-0.5098-05

Momentum flux:	0.2908-01	0.1388-01	0.1218-03	0.1398-03	
Non-Obukov:	-0.6438+02		-0.7778-01		
Heat flux:	4.995		1.142		
U*:	0.154	0.104	0.010	0.011	

3=Sign changed

RAV DATA values:

MAX:	0.1000	3.3850	0.7250	0.5370	2.8110	0.4750	0.3670	0.2340
	0.1900	15.4800	0.3240	0.3180	0.0990	0.2010	0.1630	1.6560
MIN:	-2.3610	0.8240	-0.8120	-0.9250	0.2000	-0.4750	-0.3130	-0.3430
	-0.2270	12.6400	-0.2560	-0.1990	-0.0860	-0.3280	-0.2670	-2.4000

RUN: SEPT5B.fvfil

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIN	NCRMS	FILT
91	9	5	21	59	47	1	16	0

No. of records: 9140

Location	10m	12m	4m	2m	Campbell M	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	4.354	4.643	7.240	7.512			
Degrees:	119.467	121.003	704.815	230.402			
MEANS:							
U:	2.131	1.036	0.071	0.021			
V:	-.2206-05	.317E-050	.776E-07	.154E-06			
W:	-0.098	0.007	-0.003	0.009	-0.075	-0.043	
T:			13.865				-1.594
SIGMAS:							
TRETA:	0.139	0.171	1.156	3.985			
PHI:	0.104	0.094	0.858	0.907			
U:	0.407	0.368	0.072	0.057			
V:	0.396	0.177	0.082	0.086			
W:	0.221	0.097	0.061	0.019	0.068	0.036	
T:			0.172				0.431
SKEWNESS:							
U:	0.382	0.521	0.011	-0.275			
V:	-0.197	0.110	0.131	-0.029			
W:	0.104	-0.093	-0.141	-.177E-00	-0.905	0.073	
T:			1.630				0.179
Kurtosis:							
U:	2.884	3.009	3.308	2.913			
V:	3.057	3.734	3.456	2.576			
W:	3.354	4.818	2.903	4.636	8.081	2.900	
T:			8.435				2.936

Means of primes:	10M	12M	4M	2M
UVV:	0.2338-02	0.1688-02	0.4888-05	0.4868-05
UUV:	-0.3868-02	-0.6818-02	-0.1078-05	-0.1118-06
VVV:	-0.6368-03	-0.3168-03	-0.4138-04	0.2388-06
VVU:	-0.1988-04	0.9098-04	0.8188-05	-0.3068-05
UVV:	0.1348-02	0.1228-02	-0.6908-05	0.2748-05
UUV:	-0.4328-03	-0.4208-03	0.2798-05	0.3738-06
UVU:	0.9648-03	0.9008-03	-0.4658-05	0.5938-05

Momentum flux:	0.3968-01	0.1258-01	0.1368-03	-0.3938-04	
Non-Obukov:	0.1068+02		-0.6908-01		
Heat flux:	-32.126		1.855		
U*:	0.157	0.102	0.011	0.0073	

3=Sign changed

RAV DATA values:

MAX:	0.0870	3.4100	0.5000	0.7240	3.1590	0.4370	0.2990	0.3690
	0.1940	15.0600	0.2610	0.1630	0.0840	0.1970	0.1530	0.1210
MIN:	-1.7630	0.7490	-0.8120	-0.7490	-0.0250	-0.6630	-0.3290	-0.3070
	-0.2230	13.3700	-0.2260	-0.2120	-0.0970	-0.6630	-0.2330	-2.9160

RUN: SEPT5C.fvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTN	HCNVS	FILT
91	9	5	22	30	42	1	16	0

No. of records: 8610

Location	10a	12a	6a	2a	Campbell N	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	4.324	4.625	7.764	3.697			
Degrees:	117.746	120.004	234.834	351.837			
MEANS:							
U:	1.964	0.860	0.036	0.121			
V:	0.2588-05	-.1118-050	.7108-07	-.175E-06			
W:	-0.083	0.008	0.000	0.001	-0.100	-0.047	
T:			13.345				-1.664
SIGMAS:							
THETA:	0.145	0.177	2.115	0.464			
PHI:	0.105	0.085	1.515	0.151			
U:	0.329	0.291	0.059	0.082			
V:	0.285	0.152	0.077	0.054			
W:	0.206	0.073	0.055	0.018	0.047	0.051	
T:			0.305				0.399
SKEWNESS:							
U:	0.471	0.111	-0.035	0.432			
V:	-0.084	-1.334	0.082	0.383			
W:	-0.078	0.131	-0.307	-.342E-01	-0.037	0.183	
T:			-0.486				0.473
Kurtosis:							
U:	3.430	2.907	3.115	2.660			
V:	2.679	7.674	3.045	2.807			
W:	2.596	3.661	2.887	3.031	2.409	2.783	
T:			2.379				2.946
Means of prime:	10M	12M	6M	2M			
UV:	0.3308-02	0.4428-03	0.2378-04	0.960E-05			
UW:	-0.660E-02	-0.242E-03	-0.151E-06	-0.229E-06			
VW:	0.127E-03	0.789E-04	-0.113E-04	0.333E-06			
UU:	0.360E-03	0.255E-04	-0.255E-04	0.347E-05			
VV:	-0.497E-03	0.628E-03	-0.119E-05	0.716E-06			
WW:	0.612E-03	-0.875E-03	0.144E-05	0.370E-05			
UV:	-0.272E-03	0.340E-03	-0.192E-04	-0.711E-06			
Momentum flux:	0.226E-01	0.421E-02	0.462E-03	0.259E-03			
Non-Obukov:	0.145E+02		-0.199E+01				
Heat flux:	-15.753		0.334				
U*:	0.137	0.059	0.020	0.015	S-Sign changed		

RAW DATA values:

MAX:	0.0370	3.2100	0.6240	0.3250	1.9360	0.3120	0.2690	0.1470
	0.1520	13.9700	0.1120	0.3480	0.0980	0.0450	0.1120	-0.1530
MIN:	-1.5990	0.6370	-1.1690	-0.9490	0.0630	-0.2620	-0.2340	-0.2480
	-0.2180	12.6000	-0.3290	-0.0790	-0.0820	-0.2430	-0.2070	-2.8510

RUN: SEPT12a.fvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTN	HCNVS	FILT
91	9	12	20	50	6	1	16	0

No. of records: 9143

Location	10a	12a	6a	2a	Campbell N	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	3.739	3.933	3.939	6.751			
Degrees:	199.839	196.182	130.277	186.799			
MEANS:							
U:	2.443	1.381	0.051	0.184			
V:	0.1758-060	.163E-05	-.273E-070	.913E-07			
W:	0.022	-0.044	-0.017	0.004	-0.226	-0.080	
T:			5.283				-2.266
SIGMAS:							
THETA:	0.156	0.256	2.283	0.478			
PHI:	0.086	0.131	2.227	0.168			
U:	0.522	0.495	0.102	0.096			
V:	0.381	0.253	0.117	0.078			
W:	0.209	0.181	0.114	0.028	0.109	0.090	
T:			0.480				0.667
SKEWNESS:							
U:	0.373	0.609	-0.137	-0.482			
V:	-0.304	-0.138	0.195	0.319			
W:	-0.045	-0.357	-0.915	-.452E+00	-0.642	-1.249	
T:			0.811				0.630
Kurtosis:							
U:	3.076	3.899	3.491	3.567			
V:	3.367	3.682	6.017	3.112			
W:	3.209	5.196	5.783	4.415	4.607	9.578	
T:			3.727				2.482
Means of prime:	10M	12M	6M	2M			
UV:	0.6398-02	0.5088-02	0.1498-03	0.163E-04			
UW:	-0.1498-01	-0.3408-01	-0.167E-04	0.748E-06			
VW:	0.4008-02	-0.3678-02	-0.534E-03	0.106E-04			
UU:	0.1688-03	0.3058-03	0.340E-03	-0.183E-04			
VV:	0.1368-01	0.1498-01	-0.290E-04	0.348E-05			
WW:	-0.1118-01	-0.2058-01	0.433E-05	0.187E-06			
UV:	0.5008-03	0.2988-02	0.279E-03	-0.185E-04			
Momentum flux:	0.419E-01	0.503E-01	0.168E-02	0.170E-03			
Non-Obukov:	0.1948+02		0.600E+00				
Heat flux:	-38.152		-7.363				
U*:	0.184	0.202	0.037	0.012	S-Sign changed		

RAW DATA values:

MAX:	3.7050	2.7400	0.7760	3.8970	1.9480	0.7510	0.5030	0.8180
	0.4140	7.6900	0.4500	0.2020	0.1080	0.1130	0.1930	-0.3410
MIN:	0.5130	-0.0630	-0.7260	0.0380	-0.9640	-1.0510	-0.3680	-0.7720
	-0.8300	3.9810	-0.1530	-0.3650	-0.1450	-0.9670	-1.0210	-3.8670

RUN: SEPT12b.fvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTN	HCNVS	FILT
91	9	12	21	38	51	1	16	0

No. of records: 8996

Location	10a	12a	6a	2a	Campbell N	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	3.725	3.930	4.022	6.608			
Degrees:	198.026	194.781	135.042	158.593			
MEANS:							
U:	2.577	1.523	0.060	0.113			
V:	-.716E-06	-.430E-06	-.136E-07	-.723E-07			
W:	0.010	-0.034	-0.005	0.008	-0.210	-0.057	
T:			5.421				-3.345
SIGMAS:							
THETA:	0.199	0.312	2.811	0.904			
PHI:	0.116	0.165	2.637	0.241			
U:	0.687	0.637	0.154	0.114			
V:	0.514	0.476	0.169	0.102			
W:	0.300	0.251	0.159	0.027	0.156	0.130	
T:			0.314				0.469
SKEWNESS:							
U:	0.491	0.733	0.489	-0.339			
V:	-0.369	-0.458	0.968	0.153			
W:	0.064	-0.180	-1.192	-.281E+00	-0.603	-0.753	
T:			1.498				0.612
Kurtosis:							
U:	3.450	3.729	5.776	3.086			
V:	4.025	4.071	8.686	3.351			
W:	3.533	3.570	7.188	3.254	4.722	5.740	
T:			5.751				2.948
Means of prime:	10M	12M	6M	2M			
UV:	0.157E-01	0.129E-01	0.783E-03	0.607E-05			
UW:	-0.165E+00	-0.114E+00	-0.344E-01	-0.242E-05			
VW:	0.486E-02	-0.530E-02	-0.184E-02	0.174E-04			
UU:	-0.273E-02	-0.446E-02	0.197E-02	0.292E-05			
VV:	0.115E+00	0.120E+00	-0.696E-03	-0.388E-06			
WW:	-0.117E+00	-0.122E+00	0.106E-03	-0.667E-05			
UV:	-0.198E-02	-0.561E-03	0.424E-03	-0.191E-04			
Momentum flux:	0.894E-01	0.880E-01	0.365E-02	-0.526E-04			
Non-Obukov:	0.4868+02		0.526E+00				
Heat flux:	-35.354		-16.671				
U*:	0.369	0.367	0.046	0.0078	S-Sign changed		

RAW DATA values:

MAX:	4.9300	3.8790	1.4770	4.3670	3.4910	0.9890	0.9460	0.8180
	0.7700	7.1800	0.4130	0.3830	0.1060	0.3130	0.3390	-1.0350
MIN:	0.0360	-0.0750	-1.1760	-0.0250	-0.6650	-1.1640	-0.8360	-1.3630
	-1.1930	4.8660	-0.2670	-0.4390	-0.1280	-1.2750	-0.8910	-4.4960

RUN: SEPT13C.fvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTN	HCNVS	FILT
91	9	13	22	9	12	1	16	0

No. of records: 9180

Location	10a	12a	6a	2a	Campbell N	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	3.318	3.525	4.284	6.707			
Degrees:	174.692	171.346	150.631	164.282			
MEANS:							
U:	2.477	1.442	0.135	0.174			
V:	-.302E-050	.473E-04	-.645E-080	.417E-06			
W:	0.050	0.018	0.027	0.005	-0.123	-0.002	
T:			9.316				-4.739
SIGMAS:							
THETA:	0.212	0.338	1.317	0.576			
PHI:	0.109	0.170	1.369	0.190			
U:	0.594	0.596	0.178	0.161			
V:	0.526	0.487	0.152	0.100			
W:	0.269	0.245	0.156	0.033	0.145	0.106	
T:			0.188				0.359
SKEWNESS:							
U:	-0.023	0.358	0.149	-0.641			
V:	0.228	-0.149	-0.077	0.203			
W:	-0.036	-0.213	-1.290	-.472E+00	-1.009	-0.582	
T:			0.159				0.223
Kurtosis:							
U:	3.959	2.733	6.163	3.303			
V:	4.026	3.603	8.638	4.033			
W:	3.417	3.933	8.699	4.345	4.864	5.822	
T:			2.550				3.297
Means of prime:	10M	12M	6M	2M			
UV:	0.493E-02	0.102E-01	0.199E-02	0.268E-04			
UW:	0.249E-02	-0.447E-01	-0.119E-02	-0.580E-05			
VW:	0.555E-02	-0.903E-02	-0.340E-02	-0.183E-04			
UU:	-0.630E-03	0.228E-02	-0.120E-02	-0.641E-05			
VV:	0.885E-01	0.706E-01	0.116E-02	-0.632E-04			
WW:	0.317E-01	0.321E-02	-0.112E-02	0.162E-03			
UV:	-0.490E-03	-0.310E-03	0.325E-01	-0.103E-04			
Momentum flux:	0.626E-01	0.919E-01	0.200E-02	0.258E-03			
Non-Obukov:	0.381E+02		-0.247E+01				
Heat flux:	-36.946		1.373				
U*:	0.337	0.359	0.041	0.015	S-Sign changed		

RAW DATA values:

MAX:	3.1750	4.2300	1.3800	3.3130	3.7260	1.1000	1.2640	1.3790
	0.5260	10.3480	0.6260	0.3650	0.1530	0.4460	0.3850	-3.4780
MIN:	-0.4750	0.1030	-1.3000	-0.2250	-0.4630	-1.3750	-1.0240	-1.0190
	-1.3600	8.9400	-0.5300	-0.3890	-0.1800	-1.2380	-0.9850	-6.0380

RUN: SEPT14A.fvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	NCHNS	FILT
91	9	14	20	4	31	1	16	0

No. of records: 9220

Location	18m	12m	6m	3m	Campbell M	Santex S	Fast Thermo
WIND DIRECTIONS:							
Radians:	4.646	4.791	3.607	6.134			
Degrees:	136.209	129.526	356.694	132.600			
MEANS:							
U:	1.968	0.981	0.009	0.084			
V:	0.209E-06	-.152E-05	-.520E-070	.630E-07			
W:	-0.080	-0.003	-0.004	0.005	-0.100	-0.057	
T:			12.490				-2.950
SIGMAS:							
THETA:	0.210	0.191	10.785	1.737			
PHI:	0.081	0.082	7.114	0.345			
U:	0.362	0.346	0.110	0.095			
V:	0.413	0.188	0.092	0.145			
W:	0.160	0.081	0.061	0.029	0.061	0.056	
T:			0.310				0.534
SKEWNESS:							
U:	0.244	0.285	-0.151	-0.291			
V:	-0.007	0.478	-0.379	-0.126			
W:	-0.156	0.202	-0.050	-.5306+00	-0.064	0.064	
T:			0.136				0.919
Kurtosis:							
U:	3.070	3.276	2.635	2.887			
V:	2.400	4.229	3.831	2.911			
W:	2.307	5.120	3.593	4.006	3.059	2.656	
T:			3.001				3.531
Means of prime:	18m	12m	6m	3m			
UVV:	0.122E-02	0.756E-03	-0.462E-04	0.324E-06			
UUV:	-0.160E-02	-0.213E-02	0.392E-05	-0.120E-05			
VVV:	-0.188E-02	-0.164E-03	-0.579E-05	-0.775E-04			
VVU:	-0.680E-03	0.367E-03	-0.716E-04	-0.120E-04			
UVV:	0.517E-02	0.150E-03	-0.112E-04	0.405E-04			
WUV:	-0.129E-02	0.416E-02	-0.631E-05	0.123E-04			
UVW:	0.397E-03	-0.642E-03	-0.794E-06	0.167E-04			
Momentum flux:	0.105E-01	0.834E-02	0.646E-03	-0.328E-03			
Non-Obukov:	0.866E+01		-0.591E+00				
Heat flux:	-8.257		1.853				
U*:	0.093	0.083	0.023	0.0175	S=Sign changed		

RAW DATA values:

MAX:	0.6370	3.3100	0.3370	1.0120	2.4230	0.3250	0.4160	0.3890
	0.2330	13.8300	0.3970	0.4570	0.0950	0.1140	0.1350	-0.5700
MIN:	-1.2860	0.7740	-0.6370	-0.4870	-0.0120	-0.3870	-0.3630	-0.4140
	-0.2580	11.7700	-0.2040	-0.4270	-0.1590	-0.3440	-0.3670	-4.2990

RUN: SEPT27A.fvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	NCHNS	FILT
91	9	27	21	2	54	1	16	0

No. of records: 9309

Location	18m	12m	6m	3m	Campbell M	Santex S	Fast Thermo
WIND DIRECTIONS:							
Radians:	5.652	5.936	4.711	7.380			
Degrees:	193.847	194.534	174.514	197.130			
MEANS:							
U:	2.455	1.272	0.014	0.102			
V:	-.397E-05	-.122E-050	.301E-070	.445E-06			
W:	0.038	-0.025	-0.003	0.004	-0.066	-0.030	
T:			14.687				-4.343
SIGMAS:							
THETA:	0.385	0.294	6.140	1.114			
PHI:	0.063	0.117	6.388	0.234			
U:	0.459	0.451	0.124	0.105			
V:	0.405	0.349	0.099	0.113			
W:	0.136	0.149	0.103	0.026	0.090	0.094	
T:			0.371				0.749
SKEWNESS:							
U:	0.347	0.574	0.099	-0.208			
V:	-0.391	-0.435	0.187	0.373			
W:	0.041	-0.068	-0.401	-.621E-06	-0.122	-0.595	
T:			1.304				0.664
Kurtosis:							
U:	2.911	3.457	3.831	3.904			
V:	3.745	2.856	5.643	2.632			
W:	3.530	4.098	4.596	5.126	2.875	4.451	
T:			5.931				2.789
Means of prime:	18m	12m	6m	3m			
UVV:	0.241E-02	0.386E-02	0.281E-03	0.160E-04			
UUV:	-0.500E-02	-0.176E-01	0.589E-04	-0.977E-06			
VVV:	0.272E-03	-0.235E-03	-0.161E-03	-0.804E-04			
VVU:	-0.158E-02	-0.219E-03	0.207E-03	-0.161E-04			
UVV:	-0.298E-02	0.113E-01	0.439E-04	-0.188E-04			
WUV:	-0.524E-02	-0.100E-01	0.443E-04	0.195E-05			
UVW:	0.931E-03	0.321E-02	-0.340E-03	0.195E-04			
Momentum flux:	0.202E-01	0.339E-01	0.143E-02	0.347E-03			
Non-Obukov:	0.110E-02		0.169E-01				
Heat flux:	-17.617		-2.660				
U*:	0.130	0.189	0.035	0.017	S=Sign changed		

RAW DATA values:

MAX:	3.7090	2.7730	0.6490	2.8590	1.8230	0.6990	0.7150	0.5200
	0.5090	14.9100	0.3970	0.2540	0.1050	0.1960	0.2730	-1.5430
MIN:	0.3750	0.0120	-0.5490	0.0500	-0.3000	-0.8120	-0.4300	-0.8560
	-0.7870	14.0100	-0.3540	-0.3430	-0.1710	-0.4190	-0.6180	-6.2560

RUN: OCT24.fvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	NCHNS	FILT
91	10	3	19	53	9	1	16	0

No. of records: 9126

Location	18m	12m	6m	3m	Campbell M	Santex S	Fast Thermo
WIND DIRECTIONS:							
Radians:	5.922	6.123	4.565	6.983			
Degrees:	209.383	205.796	184.997	180.195			
MEANS:							
U:	2.559	1.449	0.069	0.198			
V:	0.368E-060	.976E-06	-.718E-07	-.175E-06			
W:	0.020	-0.049	0.003	0.004	-0.087	-0.263	
T:			0.845				-1.118
SIGMAS:							
THETA:	0.124	0.209	1.518	0.473			
PHI:	0.070	0.110	1.613	0.133			
U:	0.433	0.440	0.104	0.081			
V:	0.316	0.302	0.105	0.093			
W:	0.179	0.159	0.111	0.026	0.088	0.075	
T:			0.444				0.487
SKEWNESS:							
U:	0.097	0.224	-0.001	0.192			
V:	0.070	-0.434	0.522	-0.079			
W:	-0.040	-0.066	-0.381	-.308E+00	-0.412	-0.345	
T:			1.831				0.509
Kurtosis:							
U:	3.222	2.922	4.239	2.932			
V:	2.857	3.402	6.976	2.666			
W:	2.990	3.488	4.621	4.606	3.355	3.915	
T:			8.790				2.699
Means of prime:	18m	12m	6m	3m			
UVV:	0.177E-02	0.154E-02	0.116E-03	0.933E-05			
UUV:	-0.117E-02	-0.398E-02	-0.318E-04	-0.299E-06			
VVV:	0.191E-04	-0.654E-03	-0.405E-03	0.203E-04			
VVU:	-0.132E-03	-0.756E-03	0.483E-03	0.118E-04			
UVV:	0.287E-02	0.595E-02	0.111E-03	0.402E-05			
WUV:	0.785E-03	0.155E-02	0.183E-04	0.258E-05			
UVW:	0.751E-03	-0.151E-03	-0.160E-03	-0.176E-04			
Momentum flux:	0.237E-01	0.393E-01	0.241E-02	0.186E-04			
Non-Obukov:	0.121E+02		0.163E+01				
Heat flux:	-38.938		-4.529				
U*:	0.138	0.177	0.044	0.004	S=Sign changed		

RAW DATA values:

MAX:	4.6460	1.7660	0.6510	3.3320	1.3780	0.6010	0.6900	0.6800
	0.4150	3.6590	0.4360	0.1640	0.1650	0.2400	0.0300	1.1440
MIN:	0.9230	-0.0750	-0.5260	0.2000	-0.3640	-0.7390	-0.6040	-0.9850
	-0.7790	0.0140	-0.0930	-0.4610	-0.1660	-0.6350	-0.6840	-3.1650

RUN: OCT30.fvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	NCHNS	FILT
91	10	3	20	53	55	1	16	0

No. of records: 8916

Location	18m	12m	6m	3m	Campbell M	Santex S	Fast Thermo
WIND DIRECTIONS:							
Radians:	5.911	6.100	6.441	6.915			
Degrees:	308.648	304.534	180.177	176.213			
MEANS:							
U:	2.369	1.257	0.048	0.123			
V:	0.113E-050	.394E-06	-.122E-07	-.155E-06			
W:	0.034	-0.018	-0.010	0.007	-0.093	-0.345	
T:			-0.184				-2.224
SIGMAS:							
THETA:	0.131	0.244	2.272	0.811			
PHI:	0.074	0.122	3.099	0.178			
U:	0.466	0.483	0.111	0.102			
V:	0.311	0.307	0.109	0.100			
W:	0.175	0.153	0.103	0.022	0.073	0.086	
T:			0.411				0.644
SKEWNESS:							
U:	0.265	0.181	0.022	0.011			
V:	0.061	0.313	0.370	0.343			
W:	-0.084	0.257	-0.308	-.349E+00	0.213	-0.460	
T:			1.083				1.109
Kurtosis:							
U:	4.169	3.182	3.332	3.230			
V:	3.359	4.302	4.733	3.738			
W:	3.745	5.175	5.872	4.096	4.504	3.787	
T:			5.216				4.391
Means of prime:	18m	12m	6m	3m			
UVV:	0.329E-02	0.196E-02	0.377E-03	0.999E-05			
UUV:	-0.906E-02	-0.161E-01	-0.916E-05	0.204E-06			
VVV:	0.712E-03	0.134E-02	-0.271E-03	0.106E-04			
VVU:	-0.116E-03	0.156E-02	0.363E-03	0.417E-05			
UVV:	0.212E-02	0.302E-01	0.187E-04	0.459E-05			
WUV:	0.294E-01	0.356E-01	-0.400E-06	-0.476E-05			
UVW:	-0.184E-02	-0.143E-02	0.268E-04	-0.355E-05			
Momentum flux:	0.363E-01	0.393E-01	0.279E-02	0.324E-03			
Non-Obukov:	0.128E+02		0.126E+01				
Heat flux:	-30.587		-5.438				
U*:	0.144	0.177	0.043	0.013	S=Sign changed		

RAW DATA values:

MAX:	4.4180	1.9790	0.8440	3.9340	1.2930	0.8270	0.5870	0.5350
	0.4490	3.0060	0.3710	0.2240	0.1930	0.3150	0.0780	0.6490
MIN:	0.6140	-0.1800	-0.6370	0.1130	-1.7160	-0.6390	-0.4260	-0.7030
	-0.8470	-0.9960	-0.1730	-0.4830	-0.1180	-0.4480	-0.6540	-3.7630

RUN: OCT19A.fvf;1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	NCHNS	FILT
91	10	19	19	53	19	1	16	0

No. of records: 9335

Location	18m	12m	6m	3m	Campbell N	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	3.291	5.546	6.013	3.111			
Degrees:	373.125	172.656	134.528	318.236			
MEANS:							
U:	3.151	1.911	0.084	0.037			
V:	-.5458-050	.3668-050	.5848-07	.3618-08			
W:	0.060	0.015	-0.001	0.003	-0.104	-0.030	
T:			3.389				-0.640
SIGMAS:							
THETA:	0.258	0.406	3.550	5.303			
PHI:	0.155	0.229	3.533	1.385			
U:	1.305	1.081	0.338	0.213			
V:	0.816	0.776	0.297	0.198			
W:	0.489	0.438	0.296	0.052	0.239	0.206	
T:			0.342				0.734
SKEWNESS:							
U:	0.204	0.496	1.158	0.122			
V:	0.194	0.033	0.960	0.080			
W:	0.196	-0.073	-1.341	-.1978-00	-1.155	-1.395	
T:			-0.010				0.697
Kurtosis:							
U:	2.904	2.638	7.038	3.033			
V:	3.586	3.179	30.189	3.449			
W:	3.283	3.358	6.596	3.911	5.899	7.346	
T:			3.508				3.818
Means of primes:	18W	12W	6W	3W			
UVV:	0.253E-01	0.436E-01	0.126E-01	-0.462E-04			
UWW:	-0.362E-00	-0.872E-00	-0.483E-01	-0.517E-04			
VVV:	0.377E-01	-0.382E-01	-0.215E-01	0.347E-04			
VWW:	0.726E-02	0.978E-02	0.458E-02	0.417E-04			
UVV:	0.179E+00	0.669E+00	-0.777E-02	-0.825E-04			
UUV:	-0.925E-01	-0.220E+00	-0.217E-01	0.300E-03			
UVV:	0.127E-01	0.150E-01	0.122E-01	-0.881E-04			
Momentum flux:	0.236E+00	0.291E+00	0.291E-01	0.104E-03			
Non-Obukov:	0.130E+03		0.101E+02				
Heat flux:	-56.702		-31.409				
U*:	0.437	0.486	0.154	0.009	S=Sign changed		

RAW DATA values:

MAX:	5.3340	5.7360	1.9030	5.1100	5.6100	1.7160	2.4990	1.7870
	1.1000	6.5890	0.7340	0.7990	0.2580	0.6280	0.5020	1.8690
MIN:	-1.5780	0.0380	-1.7780	-0.4760	-1.2640	-1.6910	-1.4300	-3.1620
	-1.9890	3.9280	-0.8570	-0.7690	-0.2880	-1.5930	-1.4210	-2.0450

RUN: OCT19B.fvf;1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	NCHNS	FILT
91	10	19	19	57	33	1	16	0

No. of records: 9388

Location	18m	12m	6m	3m	Campbell N	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	3.258	5.481	6.236	6.312			
Degrees:	171.249	167.905	148.628	141.635			
MEANS:							
U:	3.082	1.935	0.117	0.021			
V:	-.2628-03	-.3518-060	.6928-08	-.2178-07			
W:	0.015	0.008	-0.004	0.002	-0.125	-0.037	
T:			3.087				-1.630
SIGMAS:							
THETA:	0.262	0.365	2.628	8.840			
PHI:	0.148	0.216	2.677	2.780			
U:	0.981	0.973	0.316	0.212			
V:	0.807	0.706	0.309	0.184			
W:	0.455	0.413	0.314	0.058	0.238	0.196	
T:			0.297				0.610
SKEWNESS:							
U:	0.278	0.440	1.036	-0.424			
V:	-0.013	-0.120	0.653	-0.047			
W:	0.129	-0.187	-1.448	-.4138+00	-1.059	-1.119	
T:			-0.148				0.991
Kurtosis:							
U:	2.937	2.834	7.060	3.797			
V:	3.871	3.358	8.053	2.861			
W:	3.312	3.734	7.785	5.008	5.489	4.927	
T:			3.360				3.384
Means of primes:	18W	12W	6W	3W			
UVV:	0.117E-01	0.474E-01	0.222E-01	-0.241E-03			
UWW:	-0.317E-00	-0.347E-00	-0.486E-01	-0.200E-03			
VVV:	0.135E-01	-0.126E-01	-0.264E-01	-0.602E-03			
VWW:	0.196E-02	-0.797E-02	-0.413E-02	-0.899E-04			
UVV:	0.348E-00	0.426E-00	0.157E-01	-0.230E-03			
UUV:	-0.253E-00	0.278E-00	-0.300E-01	-0.725E-03			
UVV:	-0.940E-02	0.364E-02	0.149E-01	-0.363E-03			
Momentum flux:	0.184E+00	0.226E+00	0.365E-01	-0.147E-02			
Non-Obukov:	0.137E-03		0.149E-02				
Heat flux:	-36.726		-29.979				
U*:	0.386	0.428	0.172	0.0345	S=Sign changed		

RAW DATA values:

MAX:	4.2640	4.4740	2.2540	4.6210	5.0430	1.9280	2.2830	1.9960
	0.9840	5.9350	0.6220	0.7150	0.2560	0.6770	0.5920	1.0880
MIN:	-0.4010	0.0880	-1.5650	-0.7390	-0.6010	-1.6780	-1.6970	-2.2100
	-2.1900	4.1050	-1.1380	-0.6410	-0.3960	-1.7660	-1.6800	-2.9770

RUN: OCT19C.fvf;1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	NCHNS	FILT
91	10	19	20	47	48	1	16	0

No. of records: 7879

Location	18m	12m	6m	3m	Campbell N	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	5.339	5.581	6.434	7.128			
Degrees:	175.922	174.744	159.787	188.624			
MEANS:							
U:	3.317	2.099	0.120	0.036			
V:	0.197E-05	-.111E-05	-.828E-07	-.549E-07			
W:	0.023	-0.002	-0.019	0.005	-0.116	-0.044	
T:			4.360				-2.234
SIGMAS:							
THETA:	0.234	0.371	2.621	4.362			
PHI:	0.142	0.208	2.613	1.629			
U:	1.088	0.987	0.301	0.206			
V:	0.776	0.779	0.314	0.165			
W:	0.472	0.434	0.313	0.052	0.273	0.202	
T:			0.304				0.514
SKEWNESS:							
U:	0.033	0.259	0.393	0.107			
V:	-0.091	-0.344	0.201	0.327			
W:	-0.047	0.078	-0.976	.3068+00	-1.165	-0.988	
T:			-0.412				1.027
Kurtosis:							
U:	2.648	2.758	5.181	3.551			
V:	3.467	3.990	7.026	3.224			
W:	3.564	4.033	5.116	3.979	8.033	5.612	
T:			3.118				3.584
Means of primes:	18W	12W	6W	3W			
UVV:	0.135E-01	0.444E-01	0.586E-02	-0.160E-04			
UWW:	0.616E-02	-0.496E-00	-0.126E-01	-0.175E-03			
VVV:	-0.723E-02	-0.329E-01	-0.253E-01	-0.338E-03			
VWW:	0.607E-02	-0.878E-02	0.169E-02	0.653E-04			
UVV:	0.518E-00	0.744E-00	0.233E-01	-0.706E-04			
UUV:	0.414E-00	-0.494E-00	-0.578E-02	0.679E-03			
UVV:	-0.279E-03	0.946E-02	0.859E-02	-0.966E-06			
Momentum flux:	0.247E+00	0.242E+00	0.165E-01	0.322E-04			
Non-Obukov:	0.165E+03		0.426E+01				
Heat flux:	-47.507		-31.868				
U*:	0.467	0.443	0.116	0.005	S=Sign changed		

RAW DATA values:

MAX:	5.1970	6.1470	2.0410	4.6330	5.2460	1.9910	2.1630	1.6860
	0.9350	5.1150	0.6220	0.4450	0.1830	1.2720	0.6290	0.1320
MIN:	-0.7890	0.0250	-1.1780	-0.6390	-0.8260	-1.9530	-1.4480	-2.1170
	-1.7130	3.1910	-0.7500	-0.8590	-0.3210	-2.6010	-1.6800	-3.3310

RUN: oct19aa.fvf

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	NCHNS	FILT
91	10	24	5	51	2	1	16	0

No. of records: 9311

Location	18m	12m	6m	3m	Campbell N	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	4.975	5.043	4.882	4.808			
Degrees:	153.053	144.029	167.099	55.493			
MEANS:							
U:	1.687	0.823	0.029	0.061			
V:	-.791E-05	-.883E-05	-.478E-06	-.213E-05			
W:	0.004	-0.005	-0.033	0.001	-0.271	-0.058	
T:			-2.132				0.071
SIGMAS:							
THETA:	0.134	0.326	2.389	0.405			
PHI:	0.023	0.030	2.626	0.115			
U:	0.203	0.218	0.098	0.208			
V:	0.209	0.268	0.070	0.025			
W:	0.039	0.025	0.077	0.007	0.047	0.045	
T:			0.307				0.702
SKEWNESS:							
U:	0.351	0.255	-0.012	3.681			
V:	-0.542	0.338	0.779	5.387			
W:	3.414	-0.330	-0.199	0.252	-0.226	0.242	
T:			1.036				1.079
Kurtosis:							
U:	2.794	2.796	3.140	15.863			
V:	3.043	2.049	3.549	40.169			
W:	22.804	14.082	2.928	34.530	3.634	3.001	
T:			4.783				3.288
Means of primes:	18W	12W	6W	3W			
UVV:	0.180E-01	0.400E-04	0.623E-05	0.320E-06			
UUV:	-0.940E-05	-0.386E-04	0.190E 05	0.246E-03			
VVV:	-0.125E-03	-0.153E-03	-0.959E-05	-0.243E-03			
VWW:	0.183E-03	0.139E-03	0.995E-04	0.199E-05			
UVV:	0.182E-03	0.108E-02	-0.333E-05	0.564E-05			
UUV:	0.570E-03	0.845E-03	-0.147E-05	0.103E-03			
UVV:	0.103E-03	-0.317E-03	0.570E-05	-0.134E-04			
Momentum flux:	-0.175E-02	0.194E-02	0.782E-03	-0.532E-03			
Non-Obukov:	-0.722E+00		0.267E+01				
Heat flux:	6.225		-0.504				
U*:	0.0378	0.039	0.025	0.0205	S=Sign changed		

RAW DATA values:

MAX:	0.8130	2.2810	0.2380	0.9900	1.4800	0.1760	0.3910	0.1690
	0.1810	-0.6690	0.2920	1.5900	0.0700	-0.0050	0.0860	2.2780
MIN:	-0.0250	1.0630	-0.2380	-0.0380	0.0380	-0.2010	-0.2980	-0.2920
	-0.2720	-2.7300	-0.0440	0.0000	-0.0610	-0.3560	-0.2440	-0.9580

BIN: NOV248.fvfil

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	MCNMS	FILT
91	11	24	15	35	43	1	16	0

No. of records: 6925

Location	18m	12m	6m	3m	Campbell M	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	5.268	5.510	3.179	4.561			
Degrees:	171.828	190.724	332.156	195.918			
MEANS:							
U:	2.938	1.932	0.056	0.158			
V:	-.186E-05	-.253E-06	.622E-08	-.984E-07			
W:	0.036	-0.002	0.030	-0.007	-0.231	-0.083	
T:			-5.643				-4.050
SIGMAS:							
THETA:	0.281	0.380	3.373	2.156			
PHI:	0.160	0.219	1.047	1.884			
U:	1.073	0.998	0.202	0.307			
V:	0.825	0.735	0.188	0.340			
W:	0.471	0.424	0.058	0.297	0.222	0.163	
T:			0.307				0.474
SKEWNESS:							
U:	0.184	0.662	0.260	1.210			
V:	-0.179	-0.028	0.196	0.002			
W:	0.095	0.090	-0.580	-.151E+01	-1.211	-1.126	
T:			1.647				1.228
Kurtosis:							
U:	2.859	3.453	3.161	8.609			
V:	3.267	3.437	7.875	10.896			
W:	3.231	3.679	5.397	7.786	6.961	5.594	
T:			7.051				3.940

Means of primes:	18M	12M	6M	3M
UVV:	-0.955E-02	0.234E-01	0.153E-03	0.195E-01
UUV:	-0.897E-01	-0.956E-00	-0.136E-03	-0.464E-01
VVV:	-0.823E-02	-0.218E-01	0.989E-05	-0.369E-01
WWV:	-0.277E-02	0.692E-02	-0.256E-04	-0.319E-02
UVV:	0.316E+00	0.567E+00	-0.196E-03	0.113E+00
UUV:	0.496E+00	-0.137E+00	0.481E-04	-0.402E-01
UVV:	-0.218E-01	0.851E-02	-0.197E-03	0.117E-01

Momentum flux:	0.275E+00	0.251E+00	-0.542E-03	0.226E-01
Non-Obukov:	-0.116E+04		-0.376E+01	
Heat flux:	7.493		0.203	
U*:	0.683	0.642	0.0218	0.133 S=Sign changed

RAW DATA values:

MAX:	4.3420	6.1360	1.8950	5.3570	5.1870	2.0820	0.5330	0.6180
	0.3020	-4.1270	3.1600	2.2740	0.9800	0.4090	0.3300	-2.4010
MIN:	-1.2040	-0.1880	-1.6810	-1.0160	-0.7150	-1.8570	-0.7380	-0.5600
	-0.3920	-4.3680	-1.1750	-2.9100	-2.2640	-3.3140	-1.0930	-5.0110

BIN: NOV304.fvfil

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	MCNMS	FILT
91	11	30	10	8	18	1	16	0

No. of records: NOV3

Location	18m	12m	6m	3m	Campbell M	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	6.055	6.262	6.157	2.453			
Degrees:	334.929	312.656	162.782	280.535			
MEANS:							
U:	1.774	1.253	0.177	0.124			
V:	-.168E-05	-.193E-06	0.827E-07	-.244E-06			
W:	-0.013	-0.059	0.013	0.025	-0.257	-0.092	
T:			-5.388				-15.621
SIGMAS:							
THETA:	0.239	0.300	0.949	1.036			
PHI:	0.133	0.180	0.937	0.229			
U:	0.563	0.580	0.160	0.123			
V:	0.424	0.376	0.168	0.128			
W:	0.236	0.228	0.165	0.028	0.309	0.116	
T:			0.354				0.362
SKEWNESS:							
U:	-0.019	0.172	0.615	0.166			
V:	0.002	-0.143	0.441	-0.001			
W:	0.200	-0.114	-0.951	-.109E+00	-1.039	-1.351	
T:			0.323				0.435
Kurtosis:							
U:	3.913	3.292	6.019	3.716			
V:	2.928	3.849	5.153	2.788			
W:	3.807	4.106	4.754	3.985	6.794	6.565	
T:			1.931				2.125

Means of primes:	18M	12M	6M	3M
UVV:	0.381E-02	0.300E-02	0.811E-03	0.136E-04
UUV:	0.522E-02	0.284E-03	-0.909E-03	0.429E-05
VVV:	0.799E-03	-0.300E-02	-0.360E-02	-0.644E-04
WWV:	-0.179E-02	0.839E-03	0.143E-02	-0.571E-05
UVV:	0.677E-02	0.436E-02	0.291E-03	-0.647E-05
UUV:	0.917E-02	-0.651E-02	-0.193E-03	-0.274E-04
UVV:	0.362E-02	-0.211E-02	-0.180E-03	-0.235E-04

Momentum flux:	0.315E-01	0.744E-01	0.210E-02	0.358E-03
Non-Obukov:	-0.776E+02		0.193E+01	
Heat flux:	9.116		-3.012	
U*:	0.200	0.241	0.040	0.017 S=Sign changed

RAW DATA values:

MAX:	3.5860	1.5920	1.2660	2.8580	1.6920	0.9900	1.1830	0.4910
	0.4650	-4.4660	0.3550	0.2700	0.1560	0.1630	0.2550	-14.5900
MIN:	0.1130	-0.8650	-0.7770	0.0250	-1.5170	-1.0910	-0.4700	-0.9370
	-0.9280	-5.9010	-0.4810	-0.5350	-0.1190	-1.0090	-0.8720	-16.3100

BIN: DEC1A.fvfil

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	MCNMS	FILT
91	12	1	9	52	59	1	16	0

No. of records: 9057

Location	18m	12m	6m	3m	Campbell M	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	5.607	5.803	7.121	4.379			
Degrees:	190.957	187.516	197.998	30.909			
MEANS:							
U:	3.595	2.360	0.157	0.125			
V:	0.345E-05	-.109E-05	-.269E-06	-.698E-07			
W:	0.065	-0.015	0.002	0.052	-0.272	-0.060	
T:			-5.690				-8.034
SIGMAS:							
THETA:	0.274	0.383	2.338	1.929			
PHI:	0.166	0.224	2.237	0.553			
U:	1.372	1.228	0.368	0.236			
V:	0.986	0.904	0.366	0.242			
W:	0.594	0.528	0.350	0.069	0.256	0.216	
T:			0.225				0.340
SKEWNESS:							
U:	0.330	0.448	0.451	0.390			
V:	0.109	0.099	-0.492	0.034			
W:	0.065	-0.092	-1.417	-.103E+01	-1.359	-1.269	
T:			0.552				1.052
Kurtosis:							
U:	3.278	3.160	5.153	3.233			
V:	3.378	3.796	6.266	3.451			
W:	3.067	3.689	6.703	8.179	10.292	6.699	
T:			2.716				3.140

Means of primes:	18M	12M	6M	3M
UVV:	0.169E-01	0.841E-01	0.962E-02	0.443E-03
UUV:	0.339E-01	-0.232E-01	-0.404E-01	-0.684E-03
VVV:	0.535E-01	-0.618E-01	-0.409E-01	-0.541E-03
WWV:	0.182E-01	0.223E-01	-0.125E-01	0.215E-03
UVV:	0.337E+00	0.308E+01	0.588E-02	0.175E-02
UUV:	0.183E+01	0.456E+00	0.976E-02	0.169E-02
UVV:	-0.279E-01	-0.410E-01	-0.961E-02	-0.408E-03

Momentum flux:	0.324E+00	0.384E+00	0.306E-01	0.190E-03
Non-Obukov:	0.827E+04		0.111E+02	
Heat flux:	-1.349		-15.902	
U*:	0.503	0.547	0.127	0.038 S=Sign changed

RAW DATA values:

MAX:	8.0800	6.8620	2.3720	7.4400	4.7920	2.1330	2.2470	1.9130
	0.9350	-5.0560	1.0420	1.4850	0.3550	0.8320	0.3560	-6.9400
MIN:	-0.3890	-1.2420	-2.2210	-0.7150	-2.3330	-2.8330	-1.4980	-2.0940
	-2.6650	-6.3600	-1.1120	-0.6070	-0.5220	-2.8220	-1.7050	-8.3500

BIN: JAN36A.fvfil

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	MCNMS	FILT
91	1	26	15	18	11	1	16	0

No. of records: 8304

Location	18m	12m	6m	3m	Campbell M	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	6.344	6.736	7.124	4.569			
Degrees:	244.945	240.932	198.182	356.399			
MEANS:							
U:	2.977	1.848	0.169	0.102			
V:	0.763E-06	0.721E-06	0.463E-07	-.880E-07			
W:	0.013	-0.061	0.015	0.022	-0.241	-0.043	
T:			1.561				-3.698
SIGMAS:							
THETA:	0.316	0.443	1.567	2.286			
PHI:	0.168	0.252	1.677	0.567			
U:	1.174	0.978	0.324	0.216			
V:	0.942	0.818	0.264	0.233			
W:	0.499	0.466	0.283	0.058	0.221	0.236	
T:			0.301				0.230
SKEWNESS:							
U:	0.720	0.617	0.130	-0.014			
V:	0.333	0.354	-0.147	-0.227			
W:	-0.058	-0.344	-1.365	-.144E+01	-0.759	-1.243	
T:			-0.194				-0.026
Kurtosis:							
U:	3.592	3.439	5.756	3.035			
V:	3.363	4.146	6.450	3.940			
W:	3.903	4.157	10.689	11.496	5.428	6.281	
T:			2.658				2.717

Means of primes:	18M	12M	6M	3M
UVV:	0.923E-01	0.873E-01	0.138E-01	-0.121E-03
UUV:	-0.227E+01	-0.128E+01	-0.204E-01	-0.125E-03
VVV:	-0.385E-01	-0.903E-01	-0.517E-02	-0.149E-03
WWV:	0.150E-01	0.428E-01	-0.382E-02	0.330E-04
UVV:	0.165E+01	0.142E+01	0.207E-02	0.259E-03
UUV:	0.257E+01	-0.295E+00	-0.207E-02	0.111E-02
UVV:	-0.603E-01	-0.516E-01	0.170E-02	0.353E-04

Momentum flux:	0.290E+00	0.283E+00	0.135E-01	-0.101E-02
Non-Obukov:	0.354E+03		0.273E+01	
Heat flux:	-27.798		-36.393	
U*:	0.482	0.476	0.104	0.0283 S=Sign changed

RAW DATA values:

MAX:	7.4980	1.7760	2.7190	6.0310	1.5410	2.0420	1.8390	1.0540
	1.1660	3.2660	0.7810	1.0540	0.2480	0.8240	0.8330	-2.8410
MIN:	0.2000	-5.4000	-2.1930	-0.4130	-3.5880	-2.4810	-1.3620	-1.4980
	-3.4510	0.6280	-0.6630	-0.9300	-0.3870	-1.5030	-1.8520	-4.4730

RUN: JAN26B.fvf;1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	NCNTS	FILT
91	1	26	16	11	44	1	16	0

No. of records: 9103

Location	18m	12m	6m	2m	Campbell M	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	6.396	6.569	7.156	7.200			
Degrees:	236.481	231.383	199.986	192.537			
MEANS:							
U:	3.039	2.034	0.170	0.096			
V:	0.191E-060	.212E-05	-.155E-060	.141E-07			
W:	-0.002	-0.074	0.019	0.022	-0.250	-0.035	
T:			1.106				-4.155
SIGMAS:							
THETA:	0.266	0.382	1.553	2.249			
PHI:	0.155	0.219	1.559	0.530			
U:	1.037	1.010	0.303	0.219			
V:	0.807	0.736	0.263	0.215			
W:	0.472	0.446	0.264	0.051	0.227	0.220	
T:			0.258				0.438
SKEWNESS:							
U:	0.564	0.774	-0.288	-0.279			
V:	0.451	0.536	-0.333	0.270			
W:	0.124	-0.503	-1.147	-.476E+00	-0.869	-1.173	
T:			0.120				0.712
Kurtosis:							
U:	3.283	4.093	6.575	3.598			
V:	5.018	4.808	6.380	4.400			
W:	3.231	5.255	7.408	4.855	6.699	6.244	
T:			2.468				2.854

Means of primes:	18N	12N	6N	2N
UVV:	0.372E-01	0.671E-01	0.859E-02	-0.154E-03
UUV:	-0.530E+00	-0.193E-01	-0.252E-01	-0.222E-03
VVV:	0.964E-02	-0.245E-01	-0.581E-02	-0.925E-04
VVV:	-0.110E-01	0.277E-01	-0.208E-02	-0.604E-04
UVV:	0.154E+01	0.707E+00	0.392E-02	-0.103E-02
UUV:	0.252E+00	0.618E+00	-0.399E-02	-0.156E-02
UVV:	0.245E-01	-0.287E-01	0.269E-02	0.403E-04

Momentum flux:	0.218E+00	0.286E+00	0.110E-01	0.840E-03	
Mon-Obukov:	0.264E+03		0.219E+01		
Heat flux:	-22.438		-33.004		
U*:	0.417	0.478	0.094	0.026	S=Sign changed

RAW DATA values:

MAX:	7.3500	2.1350	1.6660	6.3130	1.9050	1.7920	2.1100	1.9790
	0.9850	1.8700	0.7100	1.1550	0.2590	0.8130	0.7250	-2.6290
MIN:	0.3760	-4.8230	-1.8170	-0.8390	-4.7110	-2.9440	-1.6620	-1.6730
	-2.2230	0.3410	-0.8460	-0.8520	-0.3090	-1.8870	-1.4510	-5.1810

RUN: JAN29A.fvf;1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	NCNTS	FILT
91	1	29	15	48	44	1	16	0

No. of records: 9354

Location	18m	12m	6m	2m	Campbell M	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	4.596	4.840	3.967	4.095			
Degrees:	133.359	132.287	131.907	14.609			
MEANS:							
U:	3.924	2.684	0.308	0.094			
V:	0.865E-06	-.333E-06	-.119E-060	.101E-06			
W:	0.092	0.037	0.019	-0.020	-0.283	0.050	
T:			-3.514				-3.857
SIGMAS:							
THETA:	0.281	0.370	1.204	3.314			
PHI:	0.174	0.221	1.180	0.707			
U:	1.434	1.390	0.631	0.293			
V:	1.101	0.993	0.371	0.312			
W:	0.684	0.592	0.364	0.067	0.311	0.195	
T:			0.159				0.511
SKEWNESS:							
U:	0.214	0.352	1.003	0.012		-	
V:	0.219	0.144	-0.070	-0.358			
W:	0.195	-0.123	-1.006	-.496E+00	-1.377	-0.072	
T:			-0.960				0.399
Kurtosis:							
U:	2.875	2.817	6.842	3.316			
V:	3.522	3.546	4.476	4.169			
W:	3.409	3.467	5.814	4.976	7.663	3.870	
T:			3.735				2.179

Means of primes:	18N	12N	6N	2N
UVV:	0.308E-01	0.185E-01	0.322E-01	0.130E-03
UUV:	-0.106E+01	-0.177E-01	-0.204E+00	-0.205E-03
VVV:	0.714E-01	-0.103E+00	-0.115E-01	-0.628E-04
VVV:	0.388E-01	0.234E-01	0.824E-02	0.623E-04
UVV:	0.103E+01	0.178E+01	-0.557E-02	-0.171E-02
UUV:	-0.969E+00	-0.127E+01	0.658E-01	-0.165E-03
UVV:	0.192E-01	-0.182E-01	-0.120E-01	-0.331E-03

Momentum flux:	0.505E+00	0.472E+00	0.707E-01	-0.235E-03	
Mon-Obukov:	0.452E+03		0.539E+02		
Heat flux:	-68.490		-21.333		
U*:	0.630	0.609	0.236	0.0145	S=Sign changed

RAW DATA values:

MAX:	3.9030	9.3000	3.3750	4.4910	8.7400	2.6480	3.6470	2.0870
	1.5290	-3.1570	0.9240	1.0640	0.2970	0.5590	0.8380	-2.4040
MIN:	-4.1410	0.0380	-3.5010	-3.8170	-0.6020	-3.0490	-1.5500	-2.2580
	-2.3440	-4.4280	-1.2790	-1.0580	-0.4010	-2.8410	-1.1410	-4.7700

RUN: FEB06F.fvf;1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	NCNTS	FILT
91	2	6	17	44	32	1	16	0

No. of records: 9218

Location	18m	12m	6m	2m	Campbell M	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	5.630	5.708	5.953	6.156			
Degrees:	192.550	182.029	131.086	132.713			
MEANS:							
U:	2.129	1.170	0.147	0.204			
V:	0.640E-050	.143E-050	.183E-060	.544E-07			
W:	0.032	-0.015	-0.017	0.015	-0.310	-0.040	
T:			-2.831				-6.187
SIGMAS:							
THETA:	0.163	0.298	0.812	0.537			
PHI:	0.075	0.126	0.746	0.114			
U:	0.401	0.398	0.133	0.106			
V:	0.348	0.349	0.119	0.109			
W:	0.159	0.147	0.110	0.023	0.097	0.062	
T:			0.406				0.329
SKEWNESS:							
U:	0.103	0.034	0.065	0.281			
V:	0.220	-0.251	-0.782	-0.516			
W:	0.459	-0.003	-0.736	-.894E-01	-0.199	0.022	
T:			0.365				0.036
Kurtosis:							
U:	3.466	2.748	3.773	3.776			
V:	4.438	2.930	4.622	2.969			
W:	4.553	4.544	5.264	3.616	3.245	3.569	
T:			1.887				3.378

Means of primes:	18N	12N	6N	2N
UVV:	0.341E-03	0.850E-03	0.522E-03	0.708E-05
UUV:	-0.114E-02	-0.689E-03	-0.759E-04	0.264E-05
VVV:	-0.928E-03	-0.616E-03	-0.298E-03	-0.228E-04
VVV:	0.124E-02	-0.611E-03	-0.514E-03	0.148E-05
UVV:	0.155E-01	0.389E-02	0.272E-04	0.262E-04
UUV:	0.496E-02	0.152E-02	-0.288E-04	-0.259E-04
UVV:	-0.138E-02	-0.110E-01	0.463E-03	-0.374E-04

Momentum flux:	0.169E-01	0.286E-01	0.358E-02	-0.132E-03	
Mon-Obukov:	0.753E+01		0.409E+01		
Heat flux:	-17.850		-3.213		
U*:	0.115	0.150	0.053	0.0115	S=Sign changed

RAW DATA values:

MAX:	3.4830	2.6190	0.9520	2.4540	3.0420	0.6770	0.7290	0.9230
	0.4160	-1.6790	0.6360	0.4150	0.1060	-0.0120	0.1740	-4.4190
MIN:	0.4260	-0.0680	-0.4890	-0.1130	-0.3510	-0.9640	-0.3350	-0.3660
	-0.7460	-3.4540	-0.1060	-0.3030	-0.0980	-0.7500	-0.3060	-7.4800

RUN: FEB06B.fvf;1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	NCNTS	FILT
91	2	6	20	57	57	1	16	0

No. of records: 9428

Location	18m	12m	6m	2m	Campbell M	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	5.857	6.005	6.317	6.868			
Degrees:	205.604	199.079	163.414	173.498			
MEANS:							
U:	2.288	1.201	0.139	0.190			
V:	-.514E-050	.871E-06	-.180E-06	-.108E-06			
W:	0.020	-0.019	-0.031	-0.012	-0.334	-0.013	
T:			-6.952				-5.372
SIGMAS:							
THETA:	0.130	0.217	0.696	0.367			
PHI:	0.036	0.074	0.648	0.153			
U:	0.346	0.313	0.092	0.089			
V:	0.299	0.260	0.097	0.070			
W:	0.083	0.089	0.090	0.029	0.077	0.050	
T:			0.250				0.349
SKEWNESS:							
U:	-0.118	0.440	0.372	0.350			
V:	-0.191	-0.535	-0.393	0.403			
W:	1.047	0.907	0.348	-.470E+00	0.390	-0.332	
T:			0.309				-0.619
Kurtosis:							
U:	2.157	2.848	3.305	2.562			
V:	2.284	2.867	3.165	2.781			
W:	4.972	8.859	3.338	4.599	4.002	3.059	
T:			2.033				3.881

Means of primes:	18N	12N	6N	2N
UVV:	0.133E-02	0.443E-03	0.160E-03	0.279E-05
UUV:	0.254E-04	-0.123E-02	0.200E-04	-0.807E-06
VVV:	-0.204E-03	-0.432E-03	-0.877E-05	0.963E-05
VVV:	0.623E-03	-0.561E-03	-0.202E-03	0.600E-05
UVV:	-0.223E-02	-0.127E-02	-0.168E-04	0.239E-05
UUV:	-0.399E-02	-0.303E-02	-0.151E-05	-0.257E-05
UVV:	-0.155E-03	0.346E-03	0.107E-03	0.181E-04

Momentum flux:	-0.989E-02	0.104E-01	-0.339E-02	0.720E-03	
Mon-Obukov:	0.160E+02		-0.273E+02		
Heat flux:	-3.689		0.434		
U*:	0.0885	0.090	0.0518	0.024	S=Sign changed

RAW DATA values:

MAX:	3.3860	1.4290	0.3010	2.2320	1.0910	0.5770	0.5140	0.5270
	0.3680	-4.2720	0.4840	0.1880	0.1360	0.0730	0.1300	-4.5710
MIN:	0.8780	0.2380	-0.3130	0.2010	-0.2380	-0.4140	-0.1480	-0.3720
	-0.3390	-7.4700	-0.0570	-0.4130	-0.1990	-0.7070	-0.1890	-7.3000

RUN: FEB07B.fvf;1

	YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTN	HCRNS	FILT
	91	2	7	16	47	8	1	16	0
No. of records:	9254								

Location	18m	12m	6m	2m	Campbell M	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	6.707	6.880	7.598	6.472			
Degrees:	234.275	249.206	225.306	150.831			
MEANS:							
U:	3.811	2.408	0.176	0.131			
V:	-.708E-05	-.202E-050	.703E-08	-.117E-07			
W:	0.023	-0.077	0.016	-0.009	-0.160	-0.053	
T:			2.048				-4.249
SIGMAS:							
THETA:	0.322	0.443	2.513	2.729			
PHI:	0.174	0.280	2.273	0.766			
U:	1.641	1.450	0.459	0.346			
V:	1.229	1.066	0.443	0.356			
W:	0.664	0.673	0.401	0.100	0.390	0.375	
T:			0.349				0.433
SKEWNESS:							
U:	0.445	0.683	0.062	0.257			
V:	0.237	0.038	-0.012	-0.283			
W:	0.021	-0.176	-1.043	-.173E-01	-1.069	-1.383	
T:			0.566				0.340
Kurtosis:							
U:	2.967	3.337	4.696	3.001			
V:	3.133	3.492	4.428	3.322			
W:	3.271	3.975	5.267	10.696	5.378	6.218	
T:			3.079				3.844
Means of primes:	18M	12M	6M	2M			
UVW:	0.1118+00	0.1506+00	0.1976-01	-0.5266-03			
UUW:	-0.6308+01	-0.7416-01	-0.9756-01	-0.4336-03			
VVW:	0.3016-01	-0.1056+00	-0.3906-01	0.3666-03			
WWU:	0.6286-02	0.5176-01	0.3206-02	-0.8836-03			
UUV:	0.3986+01	0.2326-01	-0.1266-01	0.7196-02			
UUW:	0.1396+01	0.2386-01	0.3406-01	0.2366-02			
UVV:	0.1816-01	-0.4286-01	0.2386-01	-0.9346-03			
Momentum flux:	0.4836+00	0.6596+00	0.1686-01	-0.5616-02			
Non-Obukov:	-0.2066+03		0.7596+01				
Heat flux:	102.886		-18.138				
Q=:	0.623	0.737	0.116	0.0676	S=Sign changed		

RAW DATA values:

MAX:	9.9900	2.4300	2.9200	1.7800	2.1550	2.8820	2.2490	1.9060
	1.0440	3.4260	1.5070	1.1690	0.3190	1.0250	0.8800	-2.5630
MIN:	-0.2630	-6.7280	-2.8570	-2.0930	-6.4160	-4.0100	-2.3610	-3.2800
	-2.2750	1.1870	-0.8630	-1.1960	-0.8890	-2.5410	-2.3600	-5.3130

RUN: FEB07C.fvf;1

	YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTN	HCRNS	FILT
	91	2	7	16	4	58	1	16	0
No. of records:	9297								

Location	18m	12m	6m	2m	Campbell M	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	6.533	6.686	7.201	6.346			
Degrees:	344.335	238.092	202.386	155.053			
MEANS:							
U:	3.503	2.315	0.240	0.230			
V:	-.344E-05	-.744E-050	.219E-060	.144E-06			
W:	0.060	-0.100	-0.010	-0.037	-0.185	-0.058	
T:			0.670				-5.126
SIGMAS:							
THETA:	0.339	0.433	1.613	1.508			
PHI:	0.192	0.266	1.395	0.956			
U:	1.630	1.364	0.450	0.322			
V:	1.188	1.003	0.387	0.347			
W:	0.671	0.616	0.383	0.230	0.330	0.334	
T:			0.291				0.454
SKEWNESS:							
U:	0.436	0.806	-0.073	-0.142			
V:	0.386	0.679	-0.394	-0.636			
W:	-0.139	-0.350	-1.256	.476E-01	-0.975	-1.435	
T:			-0.350				0.885
Kurtosis:							
U:	2.978	3.580	5.427	4.190			
V:	3.872	4.867	6.387	3.618			
W:	3.538	4.409	7.389	29.366	5.586	6.471	
T:			2.716				3.142
Means of primes:	18M	12M	6M	3M			
UVW:	0.2506+00	0.3066+00	0.3476-01	0.3176-03			
UUW:	-0.6356+01	-0.6386+01	-0.9806-01	0.1306-03			
VVW:	0.2746-01	-0.1426+00	-0.2016-01	0.3366-02			
WWU:	0.3186-01	0.5586-01	-0.4316-02	0.5826-02			
UUV:	0.6056+01	0.4876-01	0.5986-02	0.1766-01			
UUW:	0.1386+01	-0.1196+01	0.1996-01	-0.1826-02			
UVV:	0.1636-01	0.1596-01	0.3726-02	-0.1066-02			
Momentum flux:	0.4366+00	0.5066+00	0.3956-01	0.9876-03			
Non-Obukov:	-0.4496+03		0.1166+02				
Heat flux:	43.985		-42.141				
Q=:	0.603	0.635	0.177	0.078	S=Sign changed		

RAW DATA values:

MAX:	10.5000	2.7570	2.9950	8.0100	1.2280	3.4360	2.6960	1.9460
	3.6180	1.2150	1.7470	1.6700	0.5980	0.9000	0.7920	-3.5860
MIN:	-0.1250	-5.7660	-2.9320	-0.6270	-6.9040	-3.6210	-2.1890	-2.4050
	-2.7930	-0.4500	-1.1170	-1.1080	-1.8660	-2.7500	-2.2500	-6.1030

RUN: FEB08A.fvf;1

	YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTN	HCRNS	FILT
	91	2	8	14	11	3	1	16	0
No. of records:	9200								

Location	18m	12m	6m	2m	Campbell M	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	5.871	6.086	7.067	7.147			
Degrees:	206.394	203.694	194.893	189.465			
MEANS:							
U:	2.447	1.847	0.243	0.128			
V:	0.352E-05	-.335E-06	-.553E-06	-.381E-07			
W:	-0.027	-0.078	-0.048	0.002	-0.194	0.003	
T:			0.760				0.059
SIGMAS:							
THETA:	0.282	0.342	1.278	1.943			
PHI:	0.175	0.222	1.362	0.472			
U:	0.810	0.859	0.323	0.248			
V:	0.690	0.632	0.311	0.250			
W:	0.429	0.411	0.327	0.063	0.245	0.234	
T:			0.334				0.974
SKEWNESS:							
U:	-0.345	0.161	0.948	0.421			
V:	0.060	-0.285	-0.455	0.085			
W:	0.342	-0.115	-1.375	-.411E-00	-1.159	-1.078	
T:			-0.613				0.571
Kurtosis:							
U:	2.688	2.715	5.832	3.452			
V:	2.635	3.281	4.629	2.357			
W:	3.300	3.623	6.513	5.696	6.271	5.417	
T:			4.503				2.320
Means of primes:	18M	12M	6M	3M			
UVW:	-0.2366-01	-0.8936-02	0.3196-01	0.1426-03			
UUW:	0.3416+00	-0.3426-02	-0.4756-01	-0.3986-03			
VVW:	0.2486-01	-0.8836-02	-0.1336-01	-0.1636-03			
WWU:	-0.4276-02	0.3716-03	0.6476-02	-0.1116-03			
UUV:	-0.3416-01	0.6086-01	-0.3556-02	0.5106-03			
UUW:	-0.4826-01	-0.1706-01	0.9096-02	-0.1026-02			
UVV:	0.3616-02	0.7276-03	-0.9506-02	0.2246-03			
Momentum flux:	0.1606+00	0.2276+00	0.3926-01	0.1666-02			
Non-Obukov:	-0.6156+02		0.1536+02				
Heat flux:	65.099		-31.285				
Q=:	0.357	0.426	0.177	0.036	S=Sign changed		

RAW DATA values:

MAX:	4.4670	3.0990	2.3340	4.7810	3.4380	2.0200	1.5480	1.3750
	0.9440	2.0230	1.0870	0.5470	0.2390	0.4840	0.5470	3.1190
MIN:	-0.1250	-1.0790	-1.2420	-0.3640	-1.6310	-2.3210	-1.3060	-1.6700
	-2.0530	-0.9020	-0.6200	-0.9160	-0.3900	-1.9690	-1.4970	-1.7840

RUN: FEB08B.fvf;1

	YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTN	HCRNS	FILT
	91	2	8	15	32	5	1	16	0
No. of records:	9304								

Location	18m	12m	6m	2m	Campbell M	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	5.726	5.967	6.696	6.582			
Degrees:	328.084	196.912	173.645	157.134			
MEANS:							
U:	1.983	1.433	0.172	0.132			
V:	0.149E-050	.684E-06	-.223E-06	-.179E-06			
W:	-0.006	-0.049	-0.044	0.010	-0.202	-0.004	
T:			0.938				-1.781
SIGMAS:							
THETA:	0.313	0.371	1.556	1.326			
PHI:	0.183	0.232	1.401	0.346			
U:	0.750	0.760	0.226	0.189			
V:	0.620	0.524	0.268	0.175			
W:	0.384	0.328	0.242	0.046	0.218	0.197	
T:			0.387				0.532
SKEWNESS:							
U:	-0.097	0.264	0.320	0.076			
V:	0.279	-0.071	-0.350	-0.032			
W:	0.383	-0.121	-0.764	-.290E-00	-1.230	-1.253	
T:			-0.506				0.867
Kurtosis:							
U:	2.549	2.492	4.236	3.607			
V:	3.434	3.346	5.658	3.180			
W:	3.588	3.305	4.136	6.836	6.749	6.806	
T:			2.830				3.911
Means of primes:	18M	12M	6M	3M			
UVW:	-0.773E-02	0.158E-01	0.418E-02	0.368E-04			
UUW:	0.432E-01	-0.684E-01	-0.168E-02	-0.161E-04			
VVW:	0.344E-03	-0.130E-01	-0.114E-01	-0.289E-04			
WWU:	0.810E-02	-0.552E-03	0.115E-02	0.276E-04			
UUV:	0.863E-01	0.131E+00	0.445E-02	-0.414E-04			
UUW:	-0.163E+00	0.464E-01	0.965E-03	-0.431E-05			
UVV:	-0.102E-01	-0.537E-02	-0.189E-02	0.756E-05			
Momentum flux:	0.128E+00	0.142E+00	0.309E-01	0.544E-03			
Non-Obukov:	-0.151E+02		0.185E+01				
Heat flux:	43.822		-30.768				
Q=:	0.330	0.337	0.093	0.021	S=Sign changed		

RAW DATA values:

MAX:	3.7600	3.4350	1.5550	3.9380	2.6580	1.3930	1.4090	1.3790
	0.7370	2.0230	0.7620	0.5000	0.2310	0.3140	0.5280	0.5400
MIN:	-0.2880	-1.1410	-1.4170	-0.3010	-1.5170	-1.2540	-0.8710	-1.4730
	-1.3380	-0.5330	-0.6890	-0.6720	-0.3750	-1.6800	-1.3620	-2.8970

RUN: FE80BC.fvf;1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIN	HCRMS	FILT
91	2	8	17	17	30	1	16	0

No. of records: 9173

Location	18m	12m	6m	2m	Campbell M	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	5.781	6.073	6.516	6.319			
Degrees:	201.229	202.939	183.311	153.513			
MEANS:							
U:	3.723	0.933	0.055	0.180			
V:	-.225E-050	.244E-06	.320E-07	.102E-06			
W:	0.013	-0.019	-0.037	0.002	-0.281	-0.048	
T:			-2.363				-3.391
SIGMAS:							
TKETA:	0.169	0.243	1.469	0.298			
PHI:	0.070	0.117	1.503	0.094			
U:	0.347	0.286	0.088	0.066			
V:	0.257	0.226	0.081	0.054			
W:	0.120	0.109	0.083	0.017	0.071	0.068	
T:			0.583				0.607
SKEWNESS:							
U:	-0.486	0.171	0.304	-0.139			
V:	-0.330	-0.728	0.766	-0.400			
W:	0.179	0.795	-1.090	-.468E+00	-0.442	-0.6	
T:			0.315				0.918
Kurtosis:							
U:	3.190	2.632	5.048	2.882			
V:	3.569	4.453	8.217	3.945			
W:	3.978	6.967	8.036	4.200	3.743	7.032	
T:			2.682				2.974

Means of primes:	18M	12M	6M	2M
UVV:	-0.520E-03	0.640E-04	0.130E-03	-0.626E-06
UUV:	0.118E-02	-0.541E-03	-0.120E-04	0.111E-06
VVV:	0.102E-01	0.181E-03	-0.347E-03	0.139E-05
WVV:	-0.604E-03	-0.483E-03	0.310E-03	-0.479E-06
UVV:	-0.217E-02	0.174E-02	0.436E-04	-0.102E-05
UUV:	-0.242E-02	0.367E-03	0.286E-04	0.172E-05
UVV:	0.953E-03	0.432E-03	-0.110E-03	-0.849E-05

Momentum flux:	0.114E-01	0.159E-01	0.164E-02	0.178E-04
Non-Obukov:	0.105E+02		0.166E-01	
Heat flux:	-7.145		-2.465	
U*:	0.095	0.112	0.036	0.004

S-Sign changed

RAW DATA values:

MAX:	3.5070	1.8050	0.4840	2.1660	1.1780	0.7130	0.5830	0.5190
	0.2640	-0.4100	0.3820	0.1780	0.0660	-0.0560	0.1930	-1.4310
MIN:	0.2130	-0.0630	-0.5520	0.1500	-0.4140	-0.5270	-0.2950	-0.6800
	-0.6580	-3.4000	-0.0530	-0.2350	-0.0940	-0.6340	-0.6850	-4.6130

RUN: FE81BA.fvf;1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIN	HCRMS	FILT
91	2	28	15	37	32	1	16	0

No. of records: 9261

Location	18m	12m	6m	2m	Campbell M	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	5.871	6.108	6.926	6.321			
Degrees:	304.410	304.961	186.846	153.631			
MEANS:							
U:	3.744	2.693	0.320	0.166			
V:	0.4868-05	-.1328-05	-.4738-07	-.800E-07			
W:	-0.001	-0.047	-0.016	0.088	-0.535	-0.038	
T:			4.009				-6.930
SIGMAS:							
TKETA:	0.242	0.300	1.396	1.560			
PHI:	0.158	0.211	1.234	0.408			
U:	1.229	1.246	0.383	0.265			
V:	0.909	0.808	0.383	0.259			
W:	0.594	0.569	0.395	0.068	0.335	0.305	
T:			0.295				0.725
SKEWNESS:							
U:	0.043	0.165	0.598	-0.348			
V:	0.033	-0.025	-0.229	-0.505			
W:	0.488	-0.038	-1.338	-.848E+00	-1.040	-1.082	
T:			0.223				0.878
Kurtosis:							
U:	2.626	2.666	5.702	3.330			
V:	3.256	3.126	4.489	4.020			
W:	3.368	3.484	6.410	5.095	5.493	5.129	
T:			3.946				3.381

Means of primes:	18M	12M	6M	2M
UVV:	-0.613E-01	0.188E-01	0.404E-01	0.167E-03
UUV:	0.353E+00	-0.664E+00	-0.840E-01	-0.286E-03
VVV:	0.586E-01	-0.367E-01	-0.324E-01	-0.949E-03
WVV:	-0.394E-02	-0.218E-01	0.199E-01	-0.150E-03
UVV:	-0.717E-01	0.360E+00	0.500E-02	-0.504E-03
UUV:	-0.488E+00	0.354E-01	0.272E-01	0.934E-03
UVV:	0.617E-01	-0.518E-02	-0.187E-01	-0.427E-03

Momentum flux:	0.358E+00	0.433E+00	0.488E-01	0.141E-02	
Non-Obukov:	-0.106E+03		0.456E+02		
Heat flux:	128.628		-13.149		
U*:	0.538	0.593	0.199	0.034	S-Sign changed

RAV DATA values:

MAX:	8.0900	4.3600	3.3430	7.3300	3.6450	2.6360	2.6190	1.6050
	1.1410	3.1600	0.9280	1.1410	0.3330	1.2760	0.7240	-2.4520
MIN:	0.0500	-1.4910	-1.6790	-0.4030	-2.6440	-2.9060	-1.3730	-2.4830
	-3.4000	2.9630	-1.0730	-0.8600	-0.3230	-1.8730	-1.6390	-9.6480

RUN: FE82BB.fvf;1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIN	HCRMS	FILT
91	2	28	16	10	4	1	16	0

No. of records: 9304

Location	18m	12m	6m	2m	Campbell M	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	5.911	6.136	6.975	6.586			
Degrees:	308.693	306.017	189.642	157.359			
MEANS:							
U:	3.751	2.580	0.296	0.090			
V:	0.3998-05	-.2598-06	-.844E-07	-.134E-06			
W:	0.115	-0.021	0.013	0.087	-0.130	0.004	
T:			3.177				-7.433
SIGMAS:							
TKETA:	0.278	0.347	1.252	2.847			
PHI:	0.179	0.231	1.355	0.765			
U:	1.432	1.405	0.410	0.253			
V:	1.043	0.896	0.371	0.255			
W:	0.672	0.597	0.402	0.069	0.365	0.303	
T:			0.358				0.404
SKEWNESS:							
U:	0.130	0.393	1.390	0.054			
V:	-0.079	-0.230	-0.417	-0.721			
W:	-0.057	-0.136	-1.773	-.808E-01	-1.517	-1.433	
T:			-0.347				0.926
Kurtosis:							
U:	2.628	2.532	9.331	3.067			
V:	3.142	3.629	6.049	3.369			
W:	2.984	3.205	9.286	4.061	7.474	7.458	
T:			3.030				6.848

Means of primes:	18M	12M	6M	2M
UVV:	0.457E-01	0.766E-01	0.706E-01	0.137E-03
UUV:	-0.173E-01	-0.303E-01	-0.376E-00	-0.299E-03
VVV:	0.438E-01	-0.619E-01	-0.378E-01	-0.603E-03
WVV:	-0.484E-02	-0.675E-03	0.242E-01	-0.187E-03
UVV:	0.137E+01	0.141E+01	0.235E-01	0.650E-03
UUV:	0.175E+01	0.311E+01	0.111E+00	-0.446E-04
UVV:	-0.983E-02	-0.302E-01	-0.193E-01	0.368E-04

Momentum flux:	0.483E-00	0.538E-00	0.542E-01	0.326E-03	
Non-Obukov:	-0.206E+03		0.170E+02		
Heat flux:	903.715		-47.040		
U*:	0.634	0.658	0.209	0.016	S-Sign changed

RAV DATA values:

MAX:	9.0900	3.7860	3.5670	8.6900	4.5460	3.1170	2.9000	1.8610
	0.9280	4.1730	0.9960	1.2090	0.6130	0.8100	0.9190	-4.8810
MIN:	-0.1250	-1.3910	-2.2290	-0.4630	-2.8430	-3.9800	-1.6750	-3.4350
	-3.6310	1.9510	-0.6530	-0.8080	-0.3870	-3.0170	-2.2970	-8.7100

RUN: FE83BC.fvf;1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIN	HCRMS	FILT
91	2	28	17	32	58	1	16	0

No. of records: 9277

Location	18m	12m	6m	2m	Campbell M	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	5.983	6.174	6.957	6.274			
Degrees:	212.804	208.742	188.579	139.496			
MEANS:							
U:	3.638	2.483	0.238	0.133			
V:	-.2338-05	-.7658-060	.2108-060	.2338-07			
W:	0.080	-0.047	-0.004	0.091	-0.141	-0.020	
T:			1.662				-7.209
SIGMAS:							
TKETA:	0.341	0.319	1.384	1.727			
PHI:	0.152	0.207	1.398	0.610			
U:	1.208	1.164	0.341	0.215			
V:	0.876	0.791	0.329	0.212			
W:	0.555	0.515	0.332	0.050	0.264	0.236	
T:			0.383				0.404
SKEWNESS:							
U:	0.111	0.354	0.890	-0.013			
V:	0.006	-0.106	-0.277	-0.438			
W:	0.031	-0.081	-1.375	-.365E-00	-1.117	-1.291	
T:			-0.118				0.811
Kurtosis:							
U:	2.978	2.455	7.236	3.368			
V:	3.143	3.806	5.221	3.998			
W:	2.991	3.143	6.136	3.193	6.188	7.451	
T:			2.319				2.938

Means of primes:	18M	12M	6M	2M
UVV:	0.650E-02	0.492E-01	0.253E-01	0.167E-03
UUV:	-0.892E-01	-0.718E-00	-0.716E-01	-0.121E-03
VVV:	0.488E-01	-0.292E-01	-0.166E-01	-0.261E-03
WVV:	0.142E-01	0.383E-02	0.906E-02	-0.816E-04
UVV:	0.447E-00	0.708E-00	0.167E-01	0.154E-02
UUV:	0.505E-00	0.107E-00	0.389E-01	-0.277E-03
UVV:	-0.881E-02	-0.319E-02	-0.888E-02	-0.107E-03

Momentum flux:	0.312E+00	0.365E+00	0.355E-01	0.183E-03	
Non-Obukov:	0.622E+03		0.881E-01		
Heat flux:	-17.673		-47.765		
U*:	0.300	0.541	0.189	0.012	S-Sign changed

RAV DATA values:

MAX:	8.0700	4.1090	2.3420	6.2310	3.5820	1.9290	1.9340	1.6370
	0.9650	2.5660	0.8510	1.0960	0.3170	0.6070	0.8390	-5.9240
MIN:	0.1380	-1.5910	-1.3050	0.0750	-3.4360	-2.1040	-1.3130	-2.7720
	-2.3740	0.7090	-0.6060	-0.6600	-0.3250	-1.7230	-1.7710	-9.0500

RUN: FEB280.tv5;1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	NCRMS	FILT
91	2	28	19	9	39	1	16	0

No. of records: 9277

Location	10m	12m	6m	2m	Campbell W	Santa S	Past Thorne
WIND DIRECTIONS:							
Radians:	5.804	6.038	6.794	6.711			
Degrees:	332.529	300.397	179.254	164.532			
MEANS:							
U:	3.553	2.204	0.198	0.095			
V:	0.311E-05	-.102E-050	.255E-070	.728E-07			
W:	0.104	0.067	0.015	0.106	-0.211	-0.026	
T:			-0.676				-5.965
SIGMAS:							
THETA:	0.236	0.330	1.329	1.823			
PHI:	0.144	0.203	1.436	0.447			
U:	1.089	1.035	0.297	0.188			
V:	0.838	0.727	0.303	0.173			
W:	0.511	0.447	0.285	0.043	0.258	0.307	
T:			0.303				2.930
SKEWNESS:							
U:	0.131	0.444	1.014	0.002			
V:	-0.015	-0.111	-0.251	-0.159			
W:	0.090	-0.101	-1.396	-.594E+00	-1.220	-1.477	
T:			0.200				1.458
Kurtosis:							
U:	2.635	2.827	9.976	3.512			
V:	3.291	3.525	7.233	2.940			
W:	3.202	3.343	7.251	4.560	4.863	8.951	
T:			2.304				3.483

Means of primes:	10M	12M	6M	2M
UVV:	0.216E-01	0.390E-01	0.155E-01	-0.180E-04
UUV:	-0.256E-00	-0.924E-00	-0.687E-01	-0.154E-03
VVV:	0.121E-01	-0.211E-01	-0.199E-01	-0.113E-03
VVV:	0.367E-02	-0.660E-02	0.121E-02	-0.956E-05
UVV:	0.459E-00	0.512E-00	0.243E-01	0.362E-04
UUV:	0.974E-01	0.908E-00	0.123E-01	-0.985E-04
UVV:	0.219E-02	-0.452E-02	-0.433E-03	-0.171E-03

Momentum flux:	0.245E+00	0.236E+00	0.183E-01	-0.927E-04
Non-Obukov:	0.266E+03		0.614E+03	
Heat flux:	-38.458		-25.562	
U*:	0.441	0.433	0.121	0.0015 S-Sign changed

RAW DATA values:

MAX:	7.0200	5.1340	2.5070	7.0200	3.0330	1.8050	2.8530	1.7330
	0.7360	0.5320	0.7260	0.4520	0.3080	0.9010	0.5410	2.0670
MIN:	0.0000	-0.9900	-1.7170	-0.2380	-2.0300	-1.9790	-1.4660	-2.5140
	-3.2230	-1.3240	-0.6030	-0.6060	-0.1370	-2.1090	-1.7070	-8.3900

RUN: FEB285.tv5;1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	NCRMS	FILT
91	2	28	20	0	30	1	16	0

No. of records: 9200

Location	10m	12m	6m	2m	Campbell W	Santa S	Past Thorne
WIND DIRECTIONS:							
Radians:	6.073	6.254	6.967	6.420			
Degrees:	317.932	213.339	189.157	167.825			
MEANS:							
U:	3.935	3.616	0.273	0.163			
V:	-.280E-04	-.590E-060	.108E-04	-.177E-06			
W:	0.047	-0.083	-0.011	0.105	-0.188	-0.041	
T:			-0.203				-6.817
SIGMAS:							
THETA:	0.231	0.308	1.196	1.472			
PHI:	0.148	0.209	1.337	0.362			
U:	1.286	1.165	0.372	0.202			
V:	0.910	0.806	0.324	0.208			
W:	0.583	0.546	0.343	0.051	0.285	0.220	
T:			0.303				4.197
SKEWNESS:							
U:	0.311	0.275	0.396	-0.047			
V:	0.003	0.082	-0.514	-0.534			
W:	0.030	-0.139	-1.275	-.217E+00	-1.506	-1.140	
T:			-0.048				1.801
Kurtosis:							
U:	3.731	2.864	5.347	3.439			
V:	2.906	4.177	7.132	3.803			
W:	3.840	3.559	6.170	4.841	8.958	5.709	
T:			3.860				4.755

Means of primes:	10M	12M	6M	2M
UVV:	0.372E-01	0.337E-01	0.376E-01	0.900E-04
UUV:	-0.794E-00	-0.945E+00	-0.614E-01	-0.129E-03
VVV:	0.303E-01	-0.267E-01	-0.173E-01	-0.238E-03
VVV:	0.112E-01	-0.158E-01	0.859E-02	-0.351E-04
UVV:	0.494E+00	0.888E+00	-0.937E-02	0.454E-03
UUV:	0.318E+00	0.376E+00	0.710E-02	-0.312E-03
UVV:	0.117E-01	0.102E-01	-0.302E-02	0.140E-03

Momentum flux:	0.363E+00	0.408E+00	0.353E-01	0.372E-04
Non-Obukov:	0.488E+03		0.719E+01	
Heat flux:	-27.890		-57.605	
U*:	0.537	0.570	0.188	0.007 S-Sign changed

RAW DATA values:

MAX:	9.0000	3.7470	2.0800	7.5700	4.1720	2.6180	2.3640	3.1320
	1.0710	0.7780	0.9740	0.9470	0.3300	0.7080	0.5920	3.8760
MIN:	0.4640	-1.4290	-2.1630	-0.3000	-3.1200	-2.4810	-1.5610	-2.1070
	-2.2690	-1.1190	-0.6470	-0.7370	-0.1970	-2.4550	-1.7290	-13.9100

RUN: FEB287.tv5;1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	NCRMS	FILT
91	2	28	21	31	34	1	16	0

No. of records: 9030

Location	10m	12m	6m	2m	Campbell W	Santa S	Past Thorne
WIND DIRECTIONS:							
Radians:	5.979	6.172	6.901	7.060			
Degrees:	342.588	206.632	185.382	183.386			
MEANS:							
U:	3.693	2.340	0.253	0.215			
V:	-.190E-05	.209E-06	-.103E-06	-.115E-07			
W:	0.048	-0.052	0.022	0.105	-0.222	-0.028	
T:			-0.542				-6.551
SIGMAS:							
THETA:	0.197	0.275	0.960	0.692			
PHI:	0.121	0.185	0.902	0.180			
U:	1.012	0.965	0.241	0.165			
V:	0.726	0.643	0.243	0.149			
W:	0.445	0.434	0.229	0.039	0.200	0.174	
T:			0.263				0.491
SKEWNESS:							
U:	-0.108	0.222	0.772	0.091			
V:	-0.034	-0.340	-0.279	-0.144			
W:	0.064	-0.064	-0.848	-.258E+00	-1.231	-1.373	
T:			0.473				0.534
Kurtosis:							
U:	2.916	2.523	7.070	2.954			
V:	3.021	3.396	5.655	3.642			
W:	2.844	3.286	4.773	3.392	4.950	9.020	
T:			2.748				3.908

Means of primes:	10M	12M	6M	2M
UVV:	0.426E-02	0.173E-01	0.477E-02	0.272E-04
UUV:	0.133E+00	-0.190E+00	-0.384E-02	-0.117E-04
VVV:	0.230E-01	-0.149E-01	-0.367E-02	-0.845E-05
VVV:	0.398E-02	-0.118E-01	0.233E-02	-0.308E-03
UVV:	0.111E+00	0.209E+00	0.507E-03	0.251E-04
UUV:	-0.264E+00	0.375E-01	0.343E-01	0.833E-04
UVV:	-0.117E-01	0.109E-01	-0.269E-02	0.454E-04

Momentum flux:	0.192E+00	0.274E+00	0.113E-01	0.613E-03
Non-Obukov:	0.895E+03		0.343E+01	
Heat flux:	-38.674		-21.678	
U*:	0.391	0.447	0.095	0.022 S-Sign changed

RAW DATA values:

MAX:	6.6540	4.4830	1.8920	5.3510	2.5660	1.4290	1.4200	1.2960
	0.7360	0.3690	0.7330	0.3350	0.2320	0.4220	0.4540	4.1730
MIN:	0.3010	-1.0380	-1.5430	0.0000	-1.7290	-2.1180	-1.0810	-1.9390
	-1.4040	-1.1190	-0.3770	-0.7330	-0.0760	-1.6000	-1.7310	-7.6700

RUN: MAR01A.tv5;1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	NCRMS	FILT
91	3	1	4	56	58	1	16	0

No. of records: 9227

Location	10m	12m	6m	2m	Campbell W	Santa S	Past Thorne
WIND DIRECTIONS:							
Radians:	6.673	6.867	7.083	6.318			
Degrees:	252.363	248.665	195.947	162.004			
MEANS:							
U:	3.291	2.584	0.165	0.202			
V:	-.511E-05	-.388E-050	.122E-070	.243E-07			
W:	0.007	-0.081	-0.007	0.081	-0.178	-0.099	
T:			0.883				2.849
SIGMAS:							
THETA:	0.299	0.415	2.033	1.305			
PHI:	0.183	0.283	2.161	0.489			
U:	1.402	1.273	0.448	0.296			
V:	0.982	0.864	0.339	0.304			
W:	0.602	0.589	0.353	0.099	0.311	0.283	
T:			0.212				0.275
SKEWNESS:							
U:	0.441	0.779	-0.114	0.071			
V:	0.167	-0.006	-0.288	-0.475			
W:	-0.116	-0.511	-1.393	-.331E+01	-0.977	-1.703	
T:			-0.233				-0.150
Kurtosis:							
U:	3.076	3.798	5.861	3.414			
V:	3.223	3.427	5.347	3.901			
W:	3.341	4.471	7.238	40.171	5.380	8.782	
T:			2.647				2.884

Means of primes:	10M	12M	6M	2M
UVV:	0.122E+00	0.145E+00	0.270E-01	-0.113E-02
UUV:	-0.347E+01	-0.630E+01	-0.130E+00	-0.304E-03
VVV:	0.234E-01	-0.671E-01	-0.140E-01	-0.795E-03
VVV:	0.997E-02	0.343E-01	0.625E-02	-0.333E-03
UVV:	0.113E+01	0.152E+01	0.974E-02	0.491E-02
UUV:	0.232E+01	0.924E+00	0.498E-01	-0.143E-02
UVV:	-0.437E-01	-0.533E-01	-0.417E-02	-0.709E-03

Momentum flux:	0.403E+00	0.524E+00	0.218E-01	-0.573E-02
Non-Obukov:	0.292E+03		0.726E+01	
Heat flux:	-34.930		-27.779	
U*:	0.567	0.647	0.132	0.0685 S-Sign changed

RAW DATA values:

MAX:	8.1100	3.4480	2.5360	6.8540	1.8920	2.3050	2.1680	1.8020
	1.4410	1.5010	1.4190	1.3490	0.6070	0.7890	0.5960	3.7410
MIN:	-0.2760	-1.1770	-2.7570	-0.6390	-5.6310	-3.3450	-2.4360	-3.2210
	-3.4630	0.2870	-0.8730	-1.0560	-1.3980	-2.0430	-2.3420	1.9960

RUN: NA9018.fvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIN	MCNNS	FILT
91	3	1	9	27	31	1	16	0

No. of records: 8613

Location	18m	12m	6m	2m	Campbell M	Sonics S	Fast Thermo
VIND DIRECTIONS:							
Radians:	6.841	7.007	7.187	6.124			
Degrees:	261.987	254.473	201.798	130.883			
MEANS:							
U:	3.129	1.918	0.119	0.185			
V:	-.3088-05	-.320E-050	.185E-04	-.719E-08			
W:	0.029	-0.058	-0.008	0.084	-0.201	-0.065	
T:			1.072				2.582
SIGMAS:							
THETA:	0.350	0.473	2.902	1.527			
PHI:	0.192	0.296	2.845	0.396			
U:	1.404	1.222	0.401	0.313			
V:	1.096	0.908	0.346	0.282			
W:	0.601	0.568	0.339	0.073	0.349	0.278	
T:			0.202				0.727
SKEWNESS:							
U:	0.472	0.738	-0.044	-0.148			
V:	-0.088	-0.203	0.034	0.127			
W:	0.167	-0.005	-1.021-	133E+01	-1.403	-1.454	
T:			0.039				0.274
Kurtosis:							
U:	2.992	3.625	4.623	3.364			
V:	3.191	3.655	3.666	3.388			
W:	3.753	5.494	5.378	8.737	6.786	8.296	
T:			2.253				1.893

Means of primes:	18m	12m	6m	2m
UVV:	0.442E-01	0.116E-00	-0.205E-02	-0.853E-04
UWW:	-0.254E-01	-0.330E+01	-0.567E-01	-0.290E-03
VVV:	0.269E-01	-0.765E-01	-0.767E-02	-0.808E-03
VWW:	0.430E-02	0.242E-02	0.449E-02	-0.288E-03
UVV:	0.193E+01	0.190E+01	-0.240E-02	0.415E-02
UUW:	-0.308E-01	-0.494E-00	0.169E-01	0.167E-02
UVV:	0.127E-01	-0.383E-01	0.411E-02	-0.391E-03

Momentum flux:	0.392E+00	0.404E+00	-0.229E-01	-0.157E-02
Non-Obukov:	0.254E+03		0.101E+02	
Heat flux:	-40.597		-23.412	
U*:	0.539	0.548	0.1355	0.0358	S-Sign changed

RAW DATA values:

MAX:	7.5800	1.5040	2.5930	6.0770	1.1900	3.9840	1.6330	1.5610
	1.0410	1.5360	1.3350	1.1760	0.4260	0.7170	0.5550	4.4240
MIN:	-0.7770	-5.4510	-3.2450	-1.5280	-7.0000	-2.9950	-2.6040	-1.8840
	-2.1590	0.4780	-1.0640	-0.9390	-0.4500	-2.4810	-2.5500	0.9020

RUN: na9054.fvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIN	MCNNS	FILT
91	3	5	14	32	25	1	16	0

No. of records: 9049

Location	18m	12m	6m	2m	Campbell M	Sonics S	Fast Thermo
VIND DIRECTIONS:							
Radians:	3.514	5.703	6.307	5.194			
Degrees:	183.931	181.786	361.819	77.615			
MEANS:							
U:	2.502	1.801	0.251	0.068			
V:	-.1558-050	.192E-05	-.2348-070	.911E-07			
W:	0.039	-0.014	-0.054	0.106	-0.233	0.023	
T:			-4.130				-8.905
SIGMAS:							
THETA:	0.381	0.495	1.620	4.278			
PHI:	0.228	0.268	1.667	1.173			
U:	0.963	0.980	0.377	0.391			
V:	0.934	0.893	0.404	0.292			
W:	0.520	0.482	0.368	0.080	0.268	0.232	
T:			0.372				1.045
SKEWNESS:							
U:	-0.026	0.374	0.489	-0.047			
V:	0.217	0.091	-0.127	0.033			
W:	0.315	-0.044	-0.919-	.177E+01	-0.875	-1.204	
T:			-0.580				1.617
Kurtosis:							
U:	2.595	2.387	5.276	2.641			
V:	2.710	2.916	3.673	2.756			
W:	3.332	3.065	6.447	13.258	5.314	5.842	
T:			5.064				8.119

Means of primes:	18m	12m	6m	2m
UVV:	-0.339E-01	0.308E-01	0.262E-01	-0.231E-04
UWW:	0.849E-01	-0.471E+00	-0.726E-01	-0.903E-03
VVV:	0.335E-01	-0.416E-01	-0.336E-01	-0.207E-03
VWW:	-0.225E-02	0.175E-02	-0.147E-01	-0.259E-03
UVV:	0.343E+00	0.621E+00	0.250E-01	-0.225E-02
UUW:	0.176E+00	-0.127E+00	-0.542E-01	-0.513E-02
UVV:	-0.432E-02	0.574E-02	0.197E-01	0.426E-03

Momentum flux:	0.230E+00	0.270E+00	0.527E-01	0.926E-03
Non-Obukov:	-0.262E-02		-0.125E-02	
Heat flux:	256.392		58.814	
U*:	0.425	0.480	0.203	0.027	S-Sign changed

RAW DATA values:

MAX:	5.3080	4.7940	2.0080	4.9360	4.0030	1.6490	3.1940	1.7720
	1.0940	-2.4880	0.9900	1.1440	0.3960	0.6360	0.7410	-3.2500
MIN:	-1.0160	-0.6900	-1.8300	-0.7410	-1.2420	-1.8070	-1.3090	-2.0040
	-1.9480	-6.1280	-1.2470	-0.8390	-0.6680	-1.8270	-1.4880	-11.5200

RUN: NA8058.fvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIN	MCNNS	FILT
91	3	5	16	16	36	1	16	0

No. of records: 8014

Location	18m	12m	6m	2m	Campbell M	Sonics S	Fast Thermo
VIND DIRECTIONS:							
Radians:	4.629	4.811	6.268	2.511			
Degrees:	135.219	130.628	149.146	781.897			
MEANS:							
U:	1.971	1.364	0.152	0.043			
V:	-.9268-04	-.703E-060	.109E-07	-.160E-07			
W:	0.050	0.022	-0.035	0.114	-0.300	-0.009	
T:			-3.552				-8.224
SIGMAS:							
THETA:	0.548	0.626	1.979	5.328			
PHI:	0.200	0.257	1.637	1.109			
U:	0.897	0.851	0.376	0.232			
V:	1.080	0.854	0.301	0.228			
W:	0.394	0.350	0.249	0.047	0.226	0.133	
T:			0.249				0.423
SKEWNESS:							
U:	0.510	0.719	0.729	0.029			
V:	-0.032	0.191	0.650	0.320			
W:	0.004	0.041	-0.917-	.195E+00	-1.630	-0.374	
T:			-0.465				0.524
Kurtosis:							
U:	3.050	3.416	6.088	3.518			
V:	3.208	2.541	5.977	3.123			
W:	3.609	4.163	5.360	4.270	8.210	3.522	
T:			3.521				3.777

Means of primes:	18m	12m	6m	2m
UVV:	0.260E-01	0.204E-01	0.816E-02	0.400E-04
UWW:	-0.362E+00	-0.283E+00	-0.911E-02	0.281E-04
VVV:	-0.543E-01	-0.564E-01	-0.618E-02	-0.348E-03
VWW:	0.212E-02	0.970E-02	-0.335E-03	0.313E-04
UVV:	0.645E+00	0.643E+00	0.623E-02	-0.558E-03
UUW:	-0.101E-01	0.538E-00	-0.168E-02	-0.770E-03
UVV:	-0.429E-02	-0.482E-02	0.328F-07	0.379E-04

Momentum flux:	0.160E+00	0.131E+00	0.119E-01	0.192E-04
Non-Obukov:	-0.453E+02		0.458E+01	
Heat flux:	71.075		-17.425	
U*:	0.332	0.330	0.097	0.004	S-Sign changed

RAW DATA values:

MAX:	2.3200	5.3420	1.5800	2.5830	5.1030	1.0310	3.0430	1.1970
	0.8150	-2.6770	0.7650	0.8770	0.3130	0.2340	0.3500	-5.5530
MIN:	-3.8120	0.0380	-1.7300	-2.2190	-0.4010	-1.2480	-1.0710	-2.0950
	-1.6560	-4.6300	-0.7790	-0.7700	-0.1150	-2.3190	-0.6840	-9.3400

RUN: NA8050.fvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIN	MCNNS	FILT
91	3	5	19	57	0	1	16	0

No. of records: 9042

Location	18m	12m	6m	2m	Campbell M	Sonics S	Fast Thermo
VIND DIRECTIONS:							
Radians:	4.525	4.754	5.651	4.921			
Degrees:	139.267	137.394	113.773	61.968			
MEANS:							
U:	2.383	1.266	0.031	0.090			
V:	0.139E-05	.111E-050	.929E-08	-.197E-07			
W:	0.063	0.043	-0.041	0.136	-0.298	-0.048	
T:			-8.296				-6.767
SIGMAS:							
THETA:	0.192	0.290	4.173	1.042			
PHI:	0.108	0.163	4.266	0.261			
U:	0.388	0.533	0.136	0.096			
V:	0.438	0.367	0.128	0.093			
W:	0.247	0.206	0.130	0.024	0.301	0.061	
T:			0.303				0.69-
SKEWNESS:							
U:	0.167	0.403	0.549	-0.409			
V:	-0.157	0.636	0.622	-0.157			
W:	0.030	-0.239	-0.916-	.373E-00	-1.088	0.025	
T:			0.098				1.031
Kurtosis:							
U:	2.922	3.126	5.739	3.352			
V:	3.571	3.902	7.593	2.926			
W:	3.383	3.669	7.787	3.345	6.830	3.261	
T:			3.603				3.778

Means of primes:	18m	12m	6m	2m
UVV:	0.534E-01	0.617E-02	0.169E-02	0.653E-05
UWW:	-0.707E-03	-0.364E-01	-0.492E-03	-0.925E-06
VVV:	-0.158E-02	0.100E-02	-0.867E-03	-0.708E-05
VWW:	-0.419E-03	0.309C-02	0.105E-02	-0.370E-05
UVV:	0.208E-01	0.132E-01	-0.707E-05	-0.176E-05
UUW:	0.365E-01	-0.175E-01	0.411E-03	-0.135E-04
UVV:	0.964E-03	0.186E-02	-0.587E-03	0.114E-04

Momentum flux:	0.531E-01	0.555E-01	0.395E-02	0.225E-03
Non-Obukov:	0.362E-02		-0.223E+01	
Heat flux:	-37.845		4.266	
U*:	0.202	0.207	0.048	0.013	S-Sign changed

RAW DATA values:

MAX:	0.8410	4.4300	1.0410	1.5680	3.3120	0.7150	1.3420	0.8230
	0.4390	-7.2300	0.2980	0.3310	0.1230	0.0180	0.1880	-4.9480
MIN:	-1.8440	0.3640	-0.9290	-0.8380	-0.0230	-0.8410	-0.5470	-1.3620
	-1.2000	-8.9300	-0.2980	-0.2540	0.0470	-1.2040	-0.2890	-7.9400

RUN: NAR08A.fvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	NCRNS	FILT
91	3	6	15	56	42	1	16	0

No. of records: 9099

Location	18m	12m	6m	2m	Campbell M	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	5.385	5.577	6.626	1.920			
Degrees:	178.533	174.546	169.633	250.033			
MEANS:							
U:	2.912	2.073	0.269	0.014			
V:	-.165E-05	-.657E-06	-.298E-06	-.273E-07			
W:	0.022	-0.012	-0.031	0.089	-0.323	0.001	
T:			1.140				-8.295
SIGMAS:							
TBETA:	0.315	0.396	1.585	17.446			
PBI:	0.175	0.234	1.305	4.660			
U:	1.004	0.994	0.369	0.244			
V:	0.916	0.827	0.434	0.236			
W:	0.513	0.485	0.350	0.063	0.279	0.234	
T:			0.241				0.509
SKEWNESS:							
U:	0.164	0.331	0.893	-0.235			
V:	-0.091	-0.028	-0.120	0.017			
W:	0.302	0.003	-1.268	.897E+00	-1.096	-0.715	
T:			-0.056				-0.084
Kurtosis:							
U:	2.801	2.569	6.196	2.936			
V:	2.729	3.321	5.977	2.921			
W:	2.861	3.653	6.184	7.597	5.271	4.269	
T:			3.703				3.836

Means of primes:	18m	12m	6m	2m
UVV:	-0.112E-01	0.288E-01	0.317E-01	-0.160E-03
UUV:	-0.180E-00	-0.512E-00	-0.998E-01	0.147E-06
VVU:	0.301E-01	-0.197E-01	-0.592E-01	-0.669E-03
VVV:	0.103E-02	-0.685E-02	-0.105E-01	0.160E-03
UVV:	0.473E+00	0.801E+00	0.125E+00	0.271E-04
UUV:	-0.280E+00	0.347E-01	-0.102E+00	0.199E-03
UVV:	0.188E-01	-0.139E-01	0.164E-01	0.370E-03

Momentum flux:	0.221E+00	0.264E+00	0.426E-01	0.894E-03
Non-Obukov:	-0.482E+02		0.359E+02	
Heat flux:	135.164		-15.378	
U*:	0.420	0.460	0.385	0.027

S=Sign changed

RAW DATA values:

MAX:	4.5990	3.8780	2.2180	5.1760	5.2010	1.9920	3.8800	1.9140
	0.9590	2.3760	0.7590	0.7620	0.3580	0.5800	0.7240	-6.9210
MIN:	-0.5440	-0.7140	-1.7300	-0.8020	-1.0150	-2.8820	-0.9880	-2.8910
	-2.3690	0.1640	-0.7340	-0.7150	-0.5820	-1.9090	-1.3930	-9.9300

RUN: NAR04B.fvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	NCRNS	FILT
91	3	6	17	32	31	1	16	0

No. of records: 9154

Location	18m	12m	6m	2m	Campbell M	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	5.006	5.227	6.438	1.936			
Degrees:	136.805	154.460	158.875	250.923			
MEANS:							
U:	3.522	2.337	0.276	0.018			
V:	0.148E-050	.295E-050	.647E-070	.338E-07			
W:	0.115	0.048	-0.001	0.093	-0.224	0.025	
T:			0.113				-7.176
SIGMAS:							
TBETA:	0.290	0.404	1.483	13.685			
PBI:	0.174	0.242	1.353	3.049			
U:	1.304	1.207	0.448	0.217			
V:	1.032	0.964	0.410	0.252			
W:	0.613	0.566	0.374	0.057	0.279	0.300	
T:			0.362				0.571
SKEWNESS:							
U:	0.281	0.623	1.133	0.112			
V:	0.155	0.133	0.350	0.200			
W:	-0.018	-0.058	-1.241	-.718E+00	-0.986	-0.570	
T:			-0.382				1.050
Kurtosis:							
U:	2.984	3.435	6.184	2.965			
V:	3.144	3.797	6.443	3.882			
W:	3.576	3.729	6.558	9.477	5.769	4.231	
T:			3.908				3.461

Means of primes:	18m	12m	6m	2m
UVV:	0.720E-01	0.958E-01	0.399E-01	0.705E-03
UUV:	-0.149E-01	-0.266E-01	-0.130E-00	-0.160E-03
VVU:	0.121E-00	-0.527E-01	-0.316E-01	-0.289E-03
VVV:	-0.796E-02	0.143E-01	-0.841E-02	0.278E-04
UUV:	0.829E-00	0.350E+01	0.655E-01	0.511E-03
UVV:	0.116E+01	-0.748E+00	-0.113E+00	0.625E-03
UUV:	0.266E-01	-0.181E-01	0.211E-01	0.588E-04

Momentum flux:	0.348E+00	0.382E+00	0.562E-01	0.930E-03
Non-Obukov:	-0.377E+03		0.193E+02	
Heat flux:	34.073		-43.164	
U*:	0.527	0.551	0.312	0.027

S=Sign changed

RAW DATA values:

MAX:	6.8490	8.1700	2.4940	6.2530	7.5600	2.8190	3.0930	1.9000
	1.1200	1.0920	0.7830	0.7130	0.3450	0.6930	0.6080	-5.2820
MIN:	-2.1050	-0.4510	-3.0320	-1.6410	-0.5890	-3.2930	-1.2800	-2.6320
	-2.5420	-0.8870	-0.8870	-0.8380	-0.5820	-2.3870	-1.2910	-8.4800

RUN: NAR06C.fvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	NCRNS	FILT
91	3	6	21	42	1	1	16	0

No. of records: 9457

Location	18m	12m	6m	2m	Campbell M	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	4.510	4.695	2.197	5.391			
Degrees:	128.409	124.003	275.904	88.886			
MEANS:							
U:	1.927	0.987	0.033	0.076			
V:	0.299E-050	.137E-060	.102E-070	.336E-07			
W:	0.034	0.010	-0.053	0.108	-0.304	-0.097	
T:			-4.801				-8.723
SIGMAS:							
TBETA:	0.144	0.203	2.821	1.083			
PBI:	0.060	0.094	2.011	0.304			
U:	0.421	0.342	0.086	0.094			
V:	0.277	0.196	0.094	0.082			
W:	0.117	0.091	0.067	0.033	0.063	0.046	
T:			0.261				0.470
SKEWNESS:							
U:	0.044	0.565	-0.273	0.049			
V:	-0.543	-0.168	-0.008	-0.183			
W:	-0.080	0.051	-0.314	-.180E+00	-0.890	0.169	
T:			0.334				1.435
Kurtosis:							
U:	3.024	3.361	2.964	3.112			
V:	4.042	4.449	2.508	7.722			
W:	3.525	4.117	3.323	3.853	5.696	3.030	
T:			3.692				5.432

Means of primes:	18m	12m	6m	2m
UVV:	0.138E-02	0.433E-03	-0.309E-04	0.665E-05
UUV:	-0.292E-02	-0.124E-02	-0.551E-05	-0.349E-06
VVU:	-0.363E-03	-0.263E-03	-0.872E-04	0.942E-06
VVV:	-0.328E-03	-0.151E-03	-0.896E-06	0.887E-06
UVV:	0.290E-02	0.112E-02	0.225E-05	-0.850E-05
UUV:	-0.146E-02	-0.207E-02	-0.514E-05	-0.596E-05
VVU:	0.173E-03	0.334E-03	0.126E-04	0.526E-05

Momentum flux:	0.139E-01	0.832E-02	-0.266E-03	0.208E-03
Non-Obukov:	0.148E+02		-0.301E+00	
Heat flux:	-6.693		2.383	
U*:	0.104	0.080	0.0143	0.011

S=Sign changed

RAW DATA values:

MAX:	0.4280	3.5490	0.5020	0.6140	2.4830	0.4390	0.2900	0.2340
	0.1890	-5.4300	0.2900	0.1200	0.2120	-0.1040	0.0510	-6.9040
MIN:	-1.4050	0.6770	-0.4010	-0.4030	0.2010	-0.7650	-0.3310	-0.4130
	-0.3250	-7.3900	-0.2950	-0.1860	0.0010	-0.7530	-0.2430	-9.8300

RUN: NAR07A.fvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	NCRNS	FILT
91	3	7	10	18	35	1	16	0

No. of records: 9328

Location	18m	12m	6m	2m	Campbell M	Sonics S	Fast Thermo
WIND DIRECTIONS:							
Radians:	5.211	5.431	6.306	6.974			
Degrees:	168.561	167.321	182.753	179.564			
MEANS:							
U:	4.184	2.815	0.346	0.033			
V:	0.348E-050	.139E-06	-.135E-06	-.433E-07			
W:	0.104	0.031	-0.006	0.080	-0.214	0.056	
T:			-1.044				-8.976
SIGMAS:							
TBETA:	0.288	0.383	1.522	9.237			
PBI:	0.170	0.233	1.354	3.057			
U:	1.377	1.394	0.508	0.303			
V:	1.205	1.079	0.527	0.300			
W:	0.709	0.634	0.469	0.099	0.322	0.283	
T:			0.344				0.429
SKEWNESS:							
U:	0.017	0.371	0.901	0.001			
V:	0.244	0.164	0.232	0.061			
W:	0.050	-0.137	-1.303	-.131E+01	-0.837	-0.689	
T:			0.548				0.377
Kurtosis:							
U:	2.768	3.696	5.827	3.573			
V:	3.341	3.903	5.663	3.504			
W:	3.354	3.389	6.130	7.117	5.053	4.299	
T:			2.425				2.838

Means of primes:	18m	12m	6m	2m
UVV:	0.208E-01	0.139E+00	0.800E-01	-0.448E-03
UUV:	0.472E-00	-0.290E+01	-0.333E+00	-0.114E-02
VVU:	0.134E+00	-0.571E-01	-0.792E-01	0.937E-04
VVV:	0.394E-02	-0.112E-01	-0.426E-01	-0.270E-03
UVV:	0.657E+00	0.369E+01	0.268E+00	0.479E-04
UUV:	0.144E+01	-0.117E+00	-0.293E+00	0.320E-03
VVU:	-0.610E-01	0.133E-01	0.533E-01	0.239E-03

Momentum flux:	0.440E+00	0.533E+00	0.847E-01	-0.223E-03
Non-Obukov:	-0.173E+03		-0.309E+04	
Heat flux:	304.648		0.494	
U*:	0.590	0.650	0.259	0.0435

S=Sign changed

RAW DATA values:

MAX:	6.6300	7.7800	2.9830	7.3300	6.8660	2.6060	4.2340	2.3450
	1.3620	0.1230	1.1720	0.8830	0.4300	0.9750	0.7780	-7.4600
MIN:	-1.6350	-0.4510	-2.3190	-1.3910	-1.1610	-2.7440	-1.4360	-3.6760
	-2.9910	-1.9790	-1.0460	-1.0320	-0.5890	-2.1420	-1.4810	-10.1700

RUN: NAR07B.tvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	NCRWS	FILT
91	3	7	13	32	9	1	16	0

No. of records: 9241

Location	10m	12m	4m	2m	Campbell M	Sonics S	Past Thorne
WIND DIRECTIONS:							
Radians:	3.102	3.358	6.501	5.817			
Degrees:	162.332	161.988	182.503	113.317			
MEANS:							
U:	3.385	2.406	0.349	0.038			
V:	0.844E-06	-.672E-06	-.229E-06	.597E-07			
W:	0.046	0.029	-0.033	0.091	-0.178	0.036	
T:			5.063				-7.987
SIGMAS:							
THETA:	0.303	0.395	1.612	6.653			
PHI:	0.183	0.269	1.295	2.188			
U:	1.226	1.254	0.487	0.345			
V:	1.024	0.949	0.493	0.255			
W:	0.630	0.599	0.452	0.084	0.318	0.270	
T:			0.317				0.562
SKEWNESS:							
U:	-0.048	0.109	1.033	-0.675			
V:	-0.106	0.146	0.393	0.149			
W:	0.272	-0.049	-1.483	-.104E+01	-1.148	-0.698	
T:			-0.423				0.800
Kurtosis:							
U:	2.511	2.402	6.280	2.994			
V:	3.659	3.469	5.811	2.972			
W:	3.625	2.936	6.734	7.363	6.761	4.530	
T:			4.719				3.822

Means of primes:	1Rm	12m	4m	2m
UVV:	-0.357E-01	0.208E-01	0.860E-01	-0.182E-03
UUV:	0.504E+00	-0.814E+00	-0.421E+00	-0.379E-03
VVV:	0.781E-01	-0.479E-01	-0.998E-01	-0.120E-02
VVU:	-0.551E-02	0.337E-01	-0.289E-01	-0.179E-04
UVV:	-0.107E+01	0.122E+01	0.321E+00	0.139E-02
UUV:	-0.278E+00	-0.204E+00	-0.310E-02	0.193E-02
UUU:	0.384E-01	-0.123E-01	0.492E-01	-0.134E-03

Momentum flux:	0.385E+00	0.453E+00	0.117E+00	-0.204E-03
Non-Obukov:	-0.983E+02		-0.755E+02	
Heat flux:	155.832		31.849	
U*:	0.559	0.606	0.301	0.013E S=Sign changed

RAW DATA values:

MAX:	4.9080	6.6980	3.3300	6.2320	5.4090	2.2800	4.4600	2.0440
	1.2760	4.4480	1.1130	0.8350	0.4300	0.7740	0.8030	-5.4760
MIN:	-3.1170	-0.2250	-2.3420	-2.1040	-1.1320	-2.4040	-1.3640	-3.2320
	-3.5230	3.3300	-1.0440	-0.9170	-0.5730	-2.3780	-1.7030	-9.0500

RUN: NAR07C.tvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	NCRWS	FILT
91	3	7	14	49	23	1	16	0

No. of records: 9216

Location	10m	12m	4m	2m	Campbell M	Sonics S	Past Thorne
WIND DIRECTIONS:							
Radians:	3.220	3.488	6.441	7.523			
Degrees:	169.059	169.435	170.474	211.053			
MEANS:							
U:	2.899	1.900	0.333	0.026			
V:	-.424E-05	.898E-06	.160E-06	.113E-07			
W:	0.099	0.021	-0.008	0.004	-0.178	0.019	
T:			5.613				-7.656
SIGMAS:							
THETA:	0.329	0.438	1.793	10.380			
PHI:	0.176	0.251	1.522	3.031			
U:	1.093	1.069	0.355	0.231			
V:	0.954	0.832	0.409	0.736			
W:	0.510	0.437	0.355	0.073	0.265	0.244	
T:			0.289				0.509
SKEWNESS:							
U:	0.260	0.544	0.823	-0.333			
V:	-0.330	-0.298	-0.357	-0.138			
W:	0.155	-0.187	-1.285	-.110E+01	-1.267	-1.017	
T:			-0.731				0.488
Kurtosis:							
U:	2.913	2.857	6.170	3.699			
V:	3.182	3.804	5.058	3.352			
W:	3.165	3.574	5.885	8.013	6.611	4.715	
T:			3.436				2.970

Means of primes:	1Rm	12m	4m	2m
UVV:	0.474E-02	0.481E-01	0.233E-01	-0.191E-03
UUV:	-0.492E+00	-0.716E+00	-0.638E-01	-0.404E-03
VVV:	0.272E-01	-0.303E-01	-0.403E-01	-0.327E-03
VVU:	0.199E-02	-0.194E-01	-0.223E-01	-0.140E-03
UVV:	0.616E+00	0.114E+01	0.645E-01	0.107E-02
UUV:	-0.953E+00	-0.261E+00	-0.566E-01	0.433E-03
UUU:	0.108E-01	0.876E-02	0.160E-01	0.269E-03

Momentum flux:	0.283E+00	0.281E+00	0.378E-01	-0.113E-02
Non-Obukov:	-0.881E+02		0.144E+03	
Heat flux:	109.985		-3.263	
U*:	0.480	0.477	0.175	0.030E S=Sign changed

RAW DATA values:

MAX:	4.3800	6.6970	2.2530	3.2930	5.3830	2.1780	2.9120	1.7260
	0.8270	4.8180	1.1030	0.8450	0.3480	0.6440	0.6050	-5.9670
MIN:	-3.5400	-0.4880	-1.6450	-1.2520	-0.9390	-2.3910	-1.1330	-2.4520
	-2.3430	4.3910	-0.7740	-0.8370	-0.5860	-2.3490	-1.1870	-8.9700

RUN: NAR07D.tvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	NCRWS	FILT
91	3	7	20	46	55	1	16	0

No. of records: 9271

Location	10m	12m	4m	2m	Campbell M	Sonics S	Past Thorne
WIND DIRECTIONS:							
Radians:	4.319	4.287	2.081	3.048			
Degrees:	306.024	100.611	269.760	69.254			
MEANS:							
U:	1.833	0.891	0.022	0.060			
V:	-.149E-050	.133E-050	.458E-070	.129E-06			
W:	0.009	0.002	-0.038	0.086	-0.230	-0.070	
T:			-0.295				-7.951
SIGMAS:							
THETA:	0.234	0.313	3.356	1.791			
PHI:	0.059	0.098	2.785	0.507			
U:	0.345	0.339	0.068	0.053			
V:	0.438	0.279	0.073	0.107			
W:	0.109	0.087	0.041	0.030	0.049	0.047	
T:			0.594				0.253
SKEWNESS:							
U:	0.697	0.999	-0.107	-0.101			
V:	0.785	0.944	-0.019	0.140			
W:	0.349	0.663	-0.026	-.139E+01	0.130	0.271	
T:			-0.058				1.019
Kurtosis:							
U:	3.801	4.944	3.360	3.251			
V:	3.333	4.308	3.374	2.618			
W:	4.084	7.957	3.464	9.471	4.259	3.032	
T:			1.593				4.832

Means of primes:	1Rm	12m	4m	2m
UVV:	0.184E-02	0.195E-02	-0.211E-04	0.170E-04
UUV:	-0.331E-02	-0.497E-02	0.936E-04	0.136E-04
VVV:	0.464E-03	-0.149E-02	-0.232E-04	0.324E-04
VVU:	0.343E-02	0.180E-02	0.139E-04	-0.232E-04
UVV:	0.389E-01	0.136E-01	-0.256E-05	-0.278E-05
UUV:	0.334E-01	0.287E-01	-0.392E-04	0.491E-04
UUU:	-0.109E-02	-0.266E-02	-0.267E-05	-0.101E-04

Momentum flux:	0.831E-02	0.451E-02	0.116E-03	-0.108E-03
Non-Obukov:	0.104E+02		-0.281E-01	
Heat flux:	-4.529		2.779	
U*:	0.081	0.060	0.010	0.009E S=Sign changed

RAW DATA values:

MAX:	0.3010	3.5450	0.6770	0.5390	2.7810	0.5760	0.3190	0.2320
	0.2700	1.1870	0.2890	0.2350	0.1950	0.1360	0.1010	-6.7550
MIN:	-1.9410	0.4260	-0.5260	-1.0390	-0.0130	-0.4010	-0.2670	-0.2760
	-0.3790	-1.4600	-0.2760	-0.1880	-0.1160	-0.5680	-0.2030	-8.7600

RUN: NAR09A.tvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	NCRWS	FILT
91	3	9	15	9	42	1	16	0

No. of records: 9291

Location	10m	12m	4m	2m	Campbell M	Sonics S	Past Thorne
WIND DIRECTIONS:							
Radians:	6.469	6.015	7.410	7.160			
Degrees:	340.661	233.984	314.358	189.071			
MEANS:							
U:	5.418	3.743	0.426	0.173			
V:	0.389E-06	-.449E-070	.530E-06	-.172E-06			
W:	0.056	-0.143	0.031	0.070	-0.069	-0.076	
T:			6.205				-5.130
SIGMAS:							
THETA:	0.336	0.479	1.427	3.070			
PHI:	0.197	0.251	1.390	0.801			
U:	2.133	2.019	0.669	0.528			
V:	1.820	1.606	0.608	0.523			
W:	1.066	0.960	0.592	0.139	0.531	0.518	
T:			0.304				0.610
SKEWNESS:							
U:	0.377	0.553	0.011	-0.160			
V:	0.370	0.137	-0.332	-0.214			
W:	0.088	-0.384	-0.934	-.134E+01	-0.992	-1.471	
T:			-0.033				0.513
Kurtosis:							
U:	2.951	3.136	4.542	3.354			
V:	3.381	3.505	4.634	3.780			
W:	3.418	3.571	4.968	8.255	5.091	7.389	
T:			3.339				2.879

Means of primes:	1Rm	12m	4m	2m
UVV:	0.308E+00	0.348E+00	0.934E-01	-0.631E-02
UUV:	-0.212E+02	-0.348E+02	-0.635E+00	-0.222E-01
VVV:	0.301E+00	-0.308E+00	-0.481E-01	0.177E-02
VVU:	-0.784E-01	0.789E-01	0.766E-02	0.618E-03
UVV:	0.275E+02	0.233E+02	0.385E-01	-0.331E-01
UUV:	0.188E+02	0.943E+01	0.462E-01	-0.280E-02
UUU:	-0.361E-01	0.153E-01	0.112E-01	0.443E-02

Momentum flux:	0.972E+00	0.134E+01	0.865E-01	-0.176E-01
Non-Obukov:	-0.366E+03		0.971E+02	
Heat flux:	159.867		-16.883	
U*:	0.889	1.003	0.365	0.130E S=Sign changed

RAW DATA values:

MAX:	13.1300	5.0700	4.6060	11.8400	5.2370	3.3930	4.6990	3.3710
	2.0560	7.3000	2.3430	2.0970	0.5810	1.8500	1.4390	-2.9020
MIN:	-0.7640	-7.6000	-4.7940	-0.6390	-0.9400	-4.1960	-2.9950	-3.6300
	-3.3160	4.8950	-1.8300	-1.9660	-0.9950	-3.1980	-3.8490	-6.5610

RUN: MAB09B.fvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	HCNWS	FILT
91	3	9	16	38	57	1	16	0

No. of records: 9279

Location	10m	12m	4m	2m	Campbell W	Sonics S	Past Thermo
WIND DIRECTIONS:							
Radians:	6.325	6.308	7.184	7.065			
Degrees:	231.604	227.888	201.588	184.881			
MEANS:							
U:	5.251	3.489	0.311	0.139			
V:	-.749E-060	.122E-05	-.467E-060	.169E-06			
W:	0.095	-0.037	0.086	0.085	-0.150	-0.076	
T:			5.151				-6.809
SIGMAS:							
THETA:	0.319	0.612	1.799	3.429			
PHI:	0.193	0.262	1.673	0.732			
U:	2.195	2.015	0.629	0.483			
V:	1.474	1.438	0.560	0.475			
W:	1.024	0.916	0.521	0.101	0.462	0.507	
T:			0.275				0.263
SKEWNESS:							
U:	0.577	0.786	0.064	-0.218			
V:	0.392	0.396	-0.006	0.173			
W:	-0.147	-0.418	-1.125	.929E-00	-0.983	-1.170	
T:			-1.004				1.302
Kurtosis:							
U:	3.316	3.327	5.226	3.760			
V:	3.866	4.370	5.073	3.389			
W:	3.428	4.367	6.821	7.602	6.114	6.027	
T:			3.909				5.929

Means of primes:	1M	12M	4M	2M
UVV:	0.710E-00	0.671E-00	0.845E-01	-0.179E-02
UUV:	-0.621E-02	-0.467E-02	-0.441E-00	-0.212E-02
VVV:	0.225E-00	-0.107E-00	-0.339E-01	0.107E-02
VVV:	0.115E+00	0.109E-00	0.698E-02	-0.325E-03
UVV:	0.375E-02	0.282E-02	-0.156E-00	-0.118E-01
UUV:	0.630E+01	0.587E+02	0.511E-00	0.773E-02
UVV:	-0.180E-00	-0.226E-00	-0.108E-01	-0.431E-04

Momentum flux:	0.971E-00	0.110E+01	0.446E-01	-0.472E-02
Non-Obukov:	-0.105E+04		0.132E-02	
Heat flux:	38.520		-49.426	
U*:	0.887	0.943	0.190	0.0625

S=Sign changed

RAW DATA values:

MAX:	16.8000	4.7820	4.4640	11.3800	3.8350	4.0930	3.6300	2.1820
	1.9160	5.8510	1.6040	1.8520	0.5020	1.3680	1.6890	-2.9340
MIN:	0.3130	-7.4900	-5.0320	-0.4760	-8.6700	-5.2950	-4.8840	-3.6460
	-3.8730	4.0910	-1.8950	-1.8570	-0.8090	-3.7540	-3.6650	-5.7340

RUN: MAB10A.fvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	HCNWS	FILT
91	3	10	7	5	37	1	16	0

No. of records: 9949

Location	10m	12m	4m	2m	Campbell W	Sonics S	Past Thermo
WIND DIRECTIONS:							
Radians:	6.306	6.269	6.344	6.326			
Degrees:	231.799	239.670	184.944	142.667			
MEANS:							
U:	1.586	0.988	0.147	0.139			
V:	0.457E-07	-.662E-07	.242E-040	.103E-06			
W:	-0.007	-0.033	0.023	0.103	-0.315	-0.071	
T:			-4.850				-7.004
SIGMAS:							
THETA:	0.303	0.237	0.654	0.721			
PHI:	0.101	0.125	0.856	0.361			
U:	0.471	0.434	0.108	0.073			
V:	0.325	0.234	0.096	0.115			
W:	0.160	0.123	0.096	0.058	0.087	0.066	
T:			0.175				0.221
SKEWNESS:							
U:	0.155	0.511	-0.620	0.001			
V:	0.592	0.658	0.222	0.110			
W:	-0.142	-0.740	-0.713	.808E+00	0.194	-0.095	
T:			-0.124				0.142
Kurtosis:							
U:	2.911	3.315	4.557	2.679			
V:	4.458	5.849	5.081	3.217			
W:	4.341	5.431	6.734	4.315	4.115	2.411	
T:			2.933				1.192

Means of primes:	1M	12M	4M	2M
UVV:	0.159E-02	0.379E-02	0.118E-03	-0.106E-03
UUV:	-0.331E-02	-0.113E-01	-0.478E-06	-0.738E-06
VVV:	-0.946E-03	-0.718E-03	-0.256E-03	-0.869E-04
VVV:	0.625E-07	0.970E-03	-0.116E-03	0.719E-04
UVV:	0.699E-02	0.575E-02	0.193E-04	-0.210E-04
UUV:	0.934E-01	0.847E-02	-0.405E-05	-0.205E-05
UVV:	-0.267E-02	-0.172E-02	-0.882E-04	0.412E-05

Momentum flux:	0.249E-01	0.314E-01	-0.329E-02	-0.115E-02
Non-Obukov:	0.236E+01		-0.103E+01	
Heat flux:	-30.103		11.054	
U*:	0.139	0.157	0.0518	0.0305

S=Sign changed

RAW DATA values:

MAX:	3.2360	0.7600	0.6660	2.6450	0.6520	0.6030	0.7260	0.6390
	0.3670	-3.9060	0.3880	0.3690	0.3980	0.1670	0.1070	-6.1610
MIN:	0.1760	-1.3430	-0.7520	-0.0130	-1.1660	-0.6660	-0.5320	-0.6990
	-0.5450	-5.4490	-0.0600	-0.3880	-0.1930	-0.7850	-0.2370	-7.6600

RUN: MAB11A.fvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	HCNWS	FILT
91	3	11	23	17	18	1	16	0

No. of records: 8535

Location	10m	12m	4m	2m	Campbell W	Sonics S	Past Thermo
WIND DIRECTIONS:							
Radians:	4.363	4.612	5.823	3.606			
Degrees:	119.982	119.231	123.633	101.224			
MEANS:							
U:	3.347	2.236	0.236	0.088			
V:	-.476E-05	-.751E-06	-.308E-060	.166E-06			
W:	0.107	0.081	0.020	0.083	-0.255	0.013	
T:			4.183				-4.171
SIGMAS:							
THETA:	0.267	0.358	1.361	2.619			
PHI:	0.169	0.219	1.258	0.635			
U:	1.323	1.199	0.351	0.263			
V:	0.894	0.801	0.321	0.229			
W:	0.566	0.491	0.267	0.054	0.319	0.182	
T:			0.197				0.432
SKEWNESS:							
U:	0.554	0.488	0.564	-0.183			
V:	-0.163	0.019	-0.444	0.279			
W:	0.123	0.076	-1.184	.469E+00	-1.630	-0.170	
T:			-0.817				0.721
Kurtosis:							
U:	2.660	2.691	3.796	3.078			
V:	3.526	3.818	6.197	3.259			
W:	3.550	3.839	6.505	3.200	8.446	3.352	
T:			3.191				2.732

Means of primes:	1M	12M	4M	2M
UVV:	0.112E-01	0.508E-01	0.178E-01	-0.783E-04
UUV:	-0.156E+01	-0.129E+01	-0.333E-01	-0.267E-03
VVV:	0.831E-02	0.898E-02	-0.113E-01	-0.629E-04
VVV:	-0.622E-02	-0.930E-03	0.334E-03	0.331E-05
UVV:	0.115E+01	0.618E+00	0.178E-02	0.212E-03
UUV:	-0.105E+01	-0.134E+01	0.355E-01	0.688E-03
UVV:	0.133E-01	0.260E-01	-0.736E-02	0.394E-03

Momentum flux:	0.348E+00	0.316E+00	0.337E-01	0.897E-03
Non-Obukov:	0.197E+04		0.361E-02	
Heat flux:	-6.637		-10.902	
U*:	0.330	0.305	0.165	0.027

S=Sign changed

RAW DATA values:

MAX:	3.3770	7.3180	3.1050	2.8680	4.0870	2.4530	3.0330	2.0330
	0.9830	4.5170	1.0700	0.7150	0.3190	0.5130	0.6600	-2.8470
MIN:	-5.5720	0.2630	-2.4300	-1.6930	-0.1380	-1.6910	-1.6310	-1.2470
	-1.8100	3.3060	-0.6900	-0.8080	-0.3380	-2.5850	-0.7050	-6.9370

RUN: MAB19C.fvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	HCNWS	FILT
91	3	19	19	30	30	1	16	0

No. of records: 13574

Location	10m	12m	4m	2m	Campbell W	Sonics S	Past Thermo
WIND DIRECTIONS:							
Radians:	5.732	5.965	6.736	7.073			
Degrees:	198.620	196.778	175.948	185.766			
MEANS:							
U:	3.312	3.169	0.230	0.033			
V:	0.649E-05	-.179E-050	.443E-070	.252E-07			
W:	0.065	-0.018	0.042	0.098	-0.271	0.006	
T:			-0.732				10.629
SIGMAS:							
THETA:	0.267	0.355	1.624	6.260			
PHI:	0.161	0.236	1.475	1.612			
U:	1.167	1.067	0.339	0.236			
V:	0.884	0.771	0.361	0.208			
W:	0.533	0.470	0.330	0.054	0.249	0.230	
T:			0.232				0.311
SKEWNESS:							
U:	0.436	0.390	0.150	0.083			
V:	-0.071	-0.260	-0.372	-0.218			
W:	0.082	0.099	-1.336	.109E+01	-1.300	-0.958	
T:			-0.390				1.355
Kurtosis:							
U:	3.150	3.232	5.021	4.066			
V:	3.867	4.170	6.393	3.666			
W:	3.436	4.070	6.480	10.846	6.676	5.270	
T:			2.568				5.849

Means of primes:	1M	12M	4M	2M
UVV:	0.792E-01	0.580E-01	0.909E-02	-0.777E-04
UUV:	-0.134E+01	-0.121E+01	-0.108E-01	-0.276E-04
VVV:	0.328E-01	0.185E-02	-0.274E-01	0.134E-03
VVV:	0.866E-02	-0.167E-01	0.315E-02	-0.201E-04
UVV:	0.190E+01	0.898E+00	0.198E-01	0.268E-03
UUV:	-0.195E+00	-0.855E-01	0.665E-02	0.251E-03
UVV:	-0.193E-01	-0.187E-01	-0.323E-02	-0.344E-04

Momentum flux:	0.267E+00	0.262E+00	0.191E-01	-0.952E-03
Non-Obukov:	0.302E+03		0.101E+02	
Heat flux:	-38.309		-56.239	
U*:	0.460	0.436	0.123	0.0275

S=Sign changed

RAW DATA values:

MAX:	3.5700	5.8230	3.6050	7.1000	5.1480	2.8810	2.0960	3.2490
	0.9200	-0.0960	1.0920	0.7150	0.3230	0.6410	0.8040	-7.4700
MIN:	-0.1250	-1.1530	-3.6480	-0.1630	-2.1290	-2.3170	-1.4950	-2.1400
	-2.0490	-1.3780	-0.8160	-0.9530	-0.3190	-2.0780	-1.6180	-11.2490

```
RUN:  NAR28A.fvf:1
------------------

   YEAR  MONTH  DAY  HOUR  MIN    SEC SCTIN NCHNS  FILT
     91      3   28     9   45     27     1    16     0
No. of records:  13702
Location                 18m       12m        6m        3m  Campbell      Santex      Fast
                                                                    N           S    Thermo
-------------- --------- --------- --------- --------- --------- --------- --------- ---------
WIND DIRECTIONS:
 Radians:          4.362     4.699     4.694     4.023
 Degrees:        119.901   112.797    47.509    30.487
MEANS:
 U:                0.812     0.576     0.085     0.171
 V:          0.2146E-05-.7335E-060.7846E-070.1435E-06
 W:                0.020    -0.026    -0.034     0.103    -0.249     0.020
 T:                                   -1.464                                  -2.734
SIGMAS:
 THETA:            0.997     1.202     3.285     1.267
 PHI:              0.463     0.494     2.627     0.309
 U:                0.730     0.637     0.232     0.230
 V:                0.810     0.693     0.278     0.216
 W:                0.376     0.284     0.222     0.053     0.190     0.150
 T:                                    0.752                                   0.736
SKEWNESS:
 U:               -0.026     0.431    -0.625    -0.003
 V:               -0.314    -0.188     0.551     0.171
 W:                0.436     0.214    -0.945-.3408E+00    -1.044    -1.125
 T:                                   -0.119                                   0.603
Kurtosis:
 U:                2.206     2.664     5.424     3.511
 V:                2.523     3.104     4.688     2.644
 W:                3.248     3.438     4.794     7.225     4.590     7.890
 T:                                    2.844                                   1.319
Means of primes:      18m       12m       6m        3m
 UVV:          -0.6445E-02  0.1911E-02 -0.1837E-02  0.3027E-03
 UVV:           0.1041E-01 -0.5295E-01 -0.1681E-02 -0.9975E-04
 VVV:          -0.2195E-01 -0.3895E-01 -0.1181E-01  0.1558E-03
 WVV:          -0.5568E-02  0.6368E-02  0.7635E-03  0.2805E-04
 UVV:           0.2158E-00  0.1888E-00 -0.1268E-02 -0.1838E-03
 UUV:          -0.6331E-03 -0.1568E-01  0.3358E-03 -0.2664E-03
 UVV:           0.5088E-03 -0.2658E-03  0.1678E-02 -0.5308E-04

Momentum flux:    0.5998E-01  0.6638E-01 -0.1335E-02  0.1666E-02
Non-Obukov:      -0.6538E-01              0.3538E-00
Heat flux:          138.909                 -8.700
U*:                   0.218       0.187     0.0338       0.036    S-Sign changed

RAW DATA values:
MAX:     1.6490    2.9770    1.6490    2.3600    3.3520    1.1550    1.4170    0.9870
         0.5330    0.6700    0.8530    0.7250    0.4430    0.3160    0.4210   -0.1210
MIN:    -2.7870   -1.0290   -1.7320   -2.4730   -0.9540   -1.1480   -1.2660   -1.3570
        -1.2520   -3.9960   -0.9000   -0.5000   -0.2700   -1.2920   -1.1650   -4.4190
```

```
RUN:  NAR28B.fvf:1
------------------

   YEAR  MONTH  DAY  HOUR  MIN    SEC SCTIN NCHNS  FILT
     91      3   28    11   27     39     1    16     0
No. of records:  13413
Location                 18m       12m        6m        3m  Campbell      Santex      Fast
                                                                    N           S    Thermo
-------------- --------- --------- --------- --------- --------- --------- --------- ---------
WIND DIRECTIONS:
 Radians:          3.740     3.823     4.895     3.953
 Degrees:         94.258    79.786   70.445     4.510
MEANS:
 U:                1.397     1.016     0.134     0.109
 V:          0.8581E-06-.2765E-060.1348E-060.1398E-06
 W:                0.091     0.062     0.013     0.004    -0.189     0.071
 T:                                    1.604                                  -3.908
SIGMAS:
 THETA:            0.779     0.876     3.221     2.996
 PHI:              0.395     0.436     2.391     0.752
 U:                1.133     0.921     0.287     0.343
 V:                1.088     0.890     0.368     0.327
 W:                0.552     0.443     0.296     0.082     0.283     0.210
 T:                                    0.515                                   1.055
SKEWNESS:
 U:                0.202     0.446    -0.049    -0.304
 V:                0.496     0.986     0.358    -0.044
 W:                0.230     0.127    -0.869-.6178+00    -1.263    -0.716
 T:                                    0.258                                   0.371
Kurtosis:
 U:                2.779     3.351     4.454     3.511
 V:                3.076     4.575     3.946     3.595
 W:                3.358     3.570     5.121     5.934     5.981     4.307
 T:                                    3.344                                   2.437
Means of primes:      18m       12m       6m        3m
 UVV:          -0.3268E-01  0.2868E-01  0.6178E-02 -0.1546E-03
 UUV:          -0.3398E-00 -0.6528E-00 -0.6668E-02 -0.6868E-03
 VVV:          -0.5988E-01 -0.1148E-00 -0.1578E-01 -0.2528E-03
 WVV:           0.6008E-01  0.1908E-01  0.1358E-01 -0.3588E-03
 UVV:           0.6098E-00  0.7978E-00  0.7808E-02 -0.2178E-02
 UUV:          -0.9948E-01  0.8498E-00  0.9418E-02 -0.2998E-02
 UVV:          -0.6138E-02  0.2308E-01 -0.4878E-02 -0.3908E-03

Momentum flux:    0.1708E-00  0.1218E-00  0.1878E-01  0.2588E-02
Non-Obukov:      -0.1328E-02              -0.4528E+01
Heat flux:          332.902                 34.223
U*:                   0.369       0.311     0.131       0.045    S-Sign changed

RAW DATA values:
MAX:     1.7810    3.0270    2.7460    2.6200    3.6930    2.7460    2.0300    1.6890
         1.0490    1.6310    1.2280    0.9640    0.6530    0.5240    0.6760   -1.9830
MIN:    -4.7140   -2.6320   -2.0310   -3.7860   -1.9430   -1.6430   -1.5300   -1.6310
        -1.8620   -0.2730   -1.0380   -1.2460   -0.6890   -2.6630   -1.1960   -7.7800
```

```
RUN:  NAR29A.fvf:1
------------------

   YEAR  MONTH  DAY  HOUR  MIN    SEC SCTIN NCHNS  FILT
     91      3   29    23   36     34     1    16     0
No. of records:  13047
Location                 18m       12m        6m        3m  Campbell      Santex      Fast
                                                                    N           S    Thermo
-------------- --------- --------- --------- --------- --------- --------- --------- ---------
WIND DIRECTIONS:
 Radians:          3.694     3.966     4.980     7.089
 Degrees:        196.261   196.805   189.930   186.190
MEANS:
 U:                2.272     1.238     0.039     0.011
 V:          0.2166E-050.2056E-06-.1248E-070.4278E-07
 W:                0.052    -0.017     0.003     0.004    -0.331    -0.012
 T:                                    0.243                                   -3.046
SIGMAS:
 THETA:            0.191     0.296     2.502     8.079
 PHI:              0.098     0.170     2.514     2.270
 U:                0.547     0.555     0.168     0.098
 V:                0.433     0.367     0.148     0.090
 W:                0.224     0.210     0.149     0.025     0.121     0.100
 T:                                    0.257                                   0.374
SKEWNESS:
 U:                0.038     0.373     1.017    -0.118
 V:               -0.093    -0.320    -0.450    -0.074
 W:                0.222    -0.150    -1.187-.2488+00    -1.070    -0.735
 T:                                    0.343                                   -0.653
Kurtosis:
 U:                2.836     2.868     8.213     3.347
 V:                3.397     3.338     8.252     3.235
 W:                3.813     4.153     6.399     3.335     6.653     6.770
 T:                                    2.679                                   3.853
Means of primes:      18m       12m       6m        3m
 UVV:          0.3678E-02  0.5348E-02  0.3678E-02 -0.4128E-05
 UUV:          0.1528E-02 -0.3098E-01 -0.2388E-02 -0.8558E-06
 VVV:          0.1448E-02 -0.2568E-02 -0.1778E-02 -0.2168E-05
 WVV:          0.1288E-02  0.1468E-02  0.3678E-03  0.5778E-05
 UVV:          0.1738E-01  0.1638E-01  0.3698E-03  0.1578E-05
 UUV:         -0.2718E-02  0.1478E-01  0.1028E-02  0.4938E-06
 UVV:         -0.1678E-02 -0.1378E-02 -0.1108E-02 -0.1638E-05

Momentum flux:    0.4338E-01  0.7168E-01  0.6818E-02  0.3828E-04
Non-Obukov:       0.7818E-02              0.6828+01
Heat flux:          -30.162                 -3.980
U*:                   0.184       0.239     0.074       0.006    S-Sign changed

RAW DATA values:
MAX:     4.1230    3.0320    1.3910    3.1950    3.0050    1.0030    1.1060    1.0160
         0.4570    1.3240    0.3850    0.2890    0.1800    0.1950    0.2890   -2.7550
MIN:    -0.0500   -0.2380   -0.7140   -0.0130   -0.8650   -0.9520   -0.5790   -1.5070
        -1.0300   -0.3550   -0.3410   -0.3740   -0.0790   -1.4940   -0.7310   -4.2360
```

```
RUN:  NAR30A.fvf:1
------------------

   YEAR  MONTH  DAY  HOUR  MIN    SEC SCTIN NCHNS  FILT
     91      3   30     9   25     0     1    16     0
No. of records:  13904
Location                 18m       12m        6m        3m  Campbell      Santex      Fast
                                                                    N           S    Thermo
-------------- --------- --------- --------- --------- --------- --------- --------- ---------
WIND DIRECTIONS:
 Radians:          5.857     6.059     0.944     0.623
 Degrees:        303.544   302.177   187.875   159.562
MEANS:
 U:                3.573     2.378     0.294     0.090
 V:          -.1398-050.2765-060.1788E-06-.5258-08
 W:                0.033    -0.050     0.014     0.004    -0.208     0.008
 T:                                    3.846                                   1.231
SIGMAS:
 THETA:            0.282     0.370     1.326     3.686
 PHI:              0.170     0.227     1.251     0.727
 U:                1.269     1.242     0.391     0.241
 V:                1.007     0.880     0.389     0.243
 W:                0.606     0.540     0.367     0.066     0.331     0.300
 T:                                    1.154                                   0.457
SKEWNESS:
 U:                0.385     0.704     0.632     0.331
 V:                0.230     0.108    -0.387     0.013
 W:                0.246    -0.151    -1.118-.2858+00    -1.587    -1.313
 T:                                    0.004                                   -0.073
Kurtosis:
 U:                3.008     3.308     5.223     3.165
 V:                3.979     4.029     5.020     3.251
 W:                3.397     3.685     5.333     3.704     8.193     6.836
 T:                                    1.930                                   3.107
Means of primes:      18m       12m       6m        3m
 UVV:          0.3137E-01  0.6198E-01  0.2748E-01  0.1558E-03
 UUV:         -0.5318E-00 -0.2978E-01 -0.5938E-01 -0.1658E-03
 VVV:          0.2368E-01 -0.7148E-01 -0.3118E-01 -0.7108E-03
 WVV:          0.1818E-01  0.1138E-01  C.6688E-02 -0.2308E-05
 UVV:          0.2398E-01  0.1398+01  0.9588E-02  0.1748E-02
 UUV:          0.1408+01  0.6818E-00  0.2188E-01  0.1008E-02
 UVV:         -0.3498E-01 -0.1428E-01 -0.1158E-01 -0.5878E-05

Momentum flux:    0.3498E-00  0.6058E-00  0.3858E-01 -0.3688E-03
Non-Obukov:      -0.3978E-03              0.1878E-03
Heat flux:          33.378                  -36.002
U*:                   0.533       0.574     0.177       0.0171   S-Sign changed

RAW DATA values:
MAX:     8.3100    4.9730    2.7940    6.9170    4.0600    2.1930    2.1630    2.0610
         1.3410    8.1100    0.9170    9.8050    0.3410    0.7360    0.8450    2.6080
MIN:    -0.3630   -3.1080   -2.3810   -0.5260   -2.9080   -3.0830   -1.4410   -2.3890
        -2.4790    3.0320   -0.5730   -1.1960   -0.2660   -3.4680   -3.3080    0.3190
```

RUN: APR02A.fvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIN	MCRNS	FILT
91	4	2	22	50	8	1	16	0

No. of records: 13176

Location	18m	12m	6m	2m	Campbell M	Sonics S	Fast Thermo
VIND DIRECTIONS:							
Radians:	5.216	5.444	6.454	3.716			
Degrees:	148.857	166.907	159.811	324.236			
MEANS:							
U:	3.071	1.961	0.199	0.055			
V:	-.3378-060	.1818-070	.1028-07	-.7808-07			
W:	0.044	0.023	0.033	0.090	-0.315	0.044	
T:			-1.582				-3.218
SIGMAS:							
THETA:	0.251	0.382	1.604	2.859			
PHI:	0.144	0.220	1.495	0.785			
U:	0.953	0.934	0.318	0.172			
V:	0.770	0.760	0.319	0.159			
W:	0.443	0.427	0.297	0.044	0.211	0.153	
T:			0.170				0.383
SKEWNESS:							
U:	0.112	0.310	0.886	0.134			
V:	0.054	-0.044	0.304	-0.014			
W:	0.194	-0.038	-1.550	-.7488+00	-1.039	-0.728	
T:			0.031				-0.099
Kurtosis:							
U:	2.701	3.145	6.492	3.079			
V:	3.337	3.649	6.892	3.191			
W:	3.249	3.855	8.209	6.995	5.947	4.522	
T:			3.267				2.930

Means of primes:	18M	12M	6M	2M
UVV:	0.365E-02	0.413E-01	0.142E-01	0.117E-04
UUV:	-0.258E-01	-0.590E+00	-0.209E-01	-0.255E-04
VVV:	0.205E-01	-0.273E-01	-0.363E-01	-0.150E-03
UVW:	0.528E-02	0.901E-02	-0.578E-02	0.787E-04
UVV:	0.320E+00	0.752E+00	0.167E-01	0.101E-03
UUV:	-0.172E-02	0.278E-01	-0.214E-01	0.152E-03
UVV:	-0.445E-03	-0.146E-02	0.107E-01	-0.139E-03

Momentum flux:	0.180E+00	0.206E+00	0.228E-01	0.335E-03
Non-Obukov:	0.173E+03		0.162E+02	
Heat flux:	-27.203		-13.168	
U*:	0.377	0.404	0.134	0.016

W-Sign changed

RAW DATA values:

MAX:	6.5760	5.8420	2.0810	4.9650	5.2780	2.2820	2.2060	1.8460
	1.3130	-0.7790	0.5330	0.5870	0.2530	0.3050	0.3050	-2.5200
MIN:	-1.3410	-0.1250	-1.5290	-1.0530	-0.4890	-1.9060	-1.2570	-2.1120
	-2.1910	-2.1030	-0.6990	-0.6200	-0.1820	-1.7460	-0.8360	-3.8200

RUN: APR18A.fvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIN	MCRNS	FILT
91	4	18	22	11	25	1	16	0

No. of records: 13169

Location	18m	12m	6m	2m	Campbell M	Sonics S	Fast Thermo
VIND DIRECTIONS:							
Radians:	5.837	6.029	7.201	3.099			
Degrees:	334.434	300.454	302.578	260.741			
MEANS:							
U:	6.336	6.402	0.454	0.083			
V:	-.1318-04	-.5578-050	.8878-060	.1338-07			
W:	0.322	-0.025	0.077	0.133	-0.015	0.114	
T:			11.961				-1.044
SIGMAS:							
THETA:	0.274	0.342	1.404	5.433			
PHI:	0.166	0.227	1.393	1.457			
U:	2.265	3.182	0.494	0.414			
V:	1.788	1.505	0.437	0.449			
W:	1.083	1.000	0.432	0.130	0.563	0.516	
T:			0.513				0.306
SKEWNESS:							
U:	0.274	0.533	0.692	-0.110			
V:	-0.091	0.006	-0.491	0.286			
W:	0.037	-0.226	-1.339	.9018+00	-1.240	-0.997	
T:			-0.365				0.291
Kurtosis:							
U:	2.792	2.960	3.876	3.853			
V:	3.030	3.419	3.937	3.738			
W:	3.136	3.480	6.398	7.778	6.934	5.477	
T:			3.344				5.007

Means of primes:	18M	12M	6M	2M
UVV:	0.172E+00	0.421E+00	0.173E+00	-0.108E-02
UUV:	-0.199E-02	-0.417E-02	-0.173E-01	-0.106E-02
VVV:	0.369E-01	-0.264E+00	-0.106E+00	-0.288E-02
UVW:	-0.278E-01	-0.648E-01	0.126E-01	-0.364E-04
UUV:	0.168E+02	0.149E+02	0.361E-01	0.106E-02
UUV:	-0.139E+02	-0.118E+02	0.344E+00	0.106E-01
UVV:	0.136E+00	0.116E+00	-0.471E-01	0.203E-02

Momentum flux:	0.109E+01	0.132E+01	0.138E+00	-0.540E-02
Non-Obukov:	0.252E+04		0.320E+02	
Heat flux:	-30.144		-106.277	
U*:	0.953	1.049	0.358	0.067

W-Sign changed

RAW DATA values:

MAX:	13.0000	10.3300	6.7900	13.1100	7.4700	4.3150	5.4690	4.1010
	1.6800	13.3520	1.4800	1.9240	0.7780	2.3070	1.8440	0.8450
MIN:	-0.4380	-3.3520	-4.3900	-1.1360	-4.8280	-4.7900	-3.1740	-5.3420
	-4.3540	9.9700	-3.0550	-1.6950	-1.0250	-3.8200	-3.8370	-2.6910

RUN: MAY26A.fvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIN	MCRNS	FILT
91	5	26	0	43	32	1	16	0

No. of records: 12397

Location	18m	12m	6m	2m	Campbell M	Sonics S	Fast Thermo
VIND DIRECTIONS:							
Radians:	3.653	3.688	5.471	4.936			
Degrees:	79.396	66.317	103.445	82.834			
MEANS:							
U:	2.546	1.012	0.234	0.355			
V:	-.1748-050	.1888-050	.1288-040	.4448-06			
W:	0.098	-0.007	0.047	0.050	-0.335	-0.076	
T:			7.132				-1.194
SIGMAS:							
THETA:	0.103	0.239	0.319	0.205			
PHI:	0.034	0.047	0.701	0.098			
U:	0.205	0.272	0.067	0.055			
V:	0.161	0.243	0.075	0.073			
W:	0.086	0.047	0.047	0.035	0.043	0.039	
T:			0.233				0.463
SKEWNESS:							
U:	-0.089	0.003	-0.065	-0.024			
V:	-0.362	0.065	-0.136	-0.014			
W:	-0.998	0.392	-0.225	0.624E-01	-0.230	0.084	
T:			0.636				1.001
Kurtosis:							
U:	3.318	2.790	3.770	2.782			
V:	2.467	2.521	2.664	2.184			
W:	4.434	9.523	4.711	3.470	3.304	3.019	
T:			4.359				3.831

Means of primes:	18M	12M	6M	2M
UVV:	0.178E-03	0.235E-04	0.121E-04	0.155E-04
UUV:	-0.696E-05	-0.189E-03	-0.805E-06	-0.183E-04
VVV:	0.302E-03	-0.214E-03	-0.488E-05	-0.271E-04
UVW:	0.136E-03	-0.108E-03	-0.547E-04	0.160E-04
UVV:	0.688E-03	0.894E-03	-0.839E-06	0.565E-06
UUV:	0.533E-03	0.300E-03	-0.110E-07	-0.632E-06
UVV:	0.122E-03	0.568E-04	0.197E-04	0.447E-05

Momentum flux:	0.785E-03	0.312E-02	0.434E-03	0.246E-03
Non-Obukov:	0.303E+00		-0.900E-02	
Heat flux:	-4.700		0.007	
U*:	0.025	0.050	0.019	0.014

W-Sign changed

RAW DATA values:

MAX:	-1.3380	1.8640	0.2880	-0.3130	1.6830	0.3630	0.3810	0.4060
	0.2680	8.4200	0.3110	0.5230	0.1830	-0.1970	0.0560	0.7030
MIN:	-2.8900	0.6230	-0.3380	-1.5760	-0.2300	-0.2250	-0.2820	-0.0380
	-0.1850	6.6500	-0.1280	0.1660	-0.0870	-0.4920	-0.3380	-2.4040

RUN: MAY27A.fvf:1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIN	MCRNS	FILT
91	5	27	3	31	47	1	16	0

No. of records: 9003

Location	18m	12m	6m	2m	Campbell M	Sonics S	Fast Thermo
VIND DIRECTIONS:							
Radians:	7.160	7.345	5.906	5.244			
Degrees:	280.259	275.837	128.410	80.560			
MEANS:							
U:	2.495	0.911	0.265	0.232			
V:	-.2898-05	-.1158-06	-.3748-060	.5408-06			
W:	-0.021	-0.034	0.056	0.059	-0.369	-0.037	
T:			7.834				0.045
SIGMAS:							
THETA:	0.170	0.285	0.389	0.436			
PHI:	0.049	0.122	0.336	0.097			
U:	0.337	0.307	0.116	0.103			
V:	0.300	0.260	0.103	0.101			
W:	0.122	0.111	0.084	0.021	0.070	0.085	
T:			0.337				0.517
SKEWNESS:							
U:	0.159	0.552	-0.154	-0.376			
V:	-0.361	-0.354	-0.013	0.095			
W:	-0.088	-0.090	-0.086	0.800E-01	-0.073	-0.413	
T:			2.083				-0.402
Kurtosis:							
U:	2.876	3.319	3.016	2.687			
V:	2.523	3.039	3.127	3.454			
W:	3.237	5.431	2.853	3.138	3.521	3.259	
T:			9.232				3.929

Means of primes:	18M	12M	6M	2M
UVV:	0.116E-02	0.172E-02	0.628E-04	-0.414E-05
UUV:	-0.265E-03	-0.333E-02	0.132E-05	0.578E-06
VVV:	0.119E-03	0.232E-04	-0.129E-03	-0.207E-04
UVW:	-0.900E-03	-0.289E-03	-0.409E-05	-0.333E-05
UVV:	0.707E-03	0.208E-02	-0.747E-05	-0.658E-05
UUV:	-0.405E-02	-0.211E-02	0.693E-05	-0.140E-05
UVV:	0.602E-03	-0.149E-03	-0.638E-04	-0.792E-05

Momentum flux:	0.119E-01	0.171E-01	0.152E-02	0.396E-03
Non-Obukov:	0.553E+01		0.292E+01	
Heat flux:	-15.219		-1.317	
U*:	0.099	0.138	0.035	0.018

W-Sign changed

RAW DATA values:

MAX:	2.6280	-0.7310	0.3750	1.4320	0.0130	0.6130	0.5670	0.4060
	0.3200	10.0700	0.4490	0.4350	0.1570	-0.1390	0.1980	1.5590
MIN:	0.4230	-1.9280	-0.3010	-0.2630	-2.1520	-0.5380	-0.0760	-0.2890
	-0.2190	7.2900	-0.2070	-0.1470	-0.0210	-0.6860	-0.4130	-2.1660

RUN: june7a.fvf

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	MCNMS	FILT
91	6	7	0	44	56	1	16	0

No. of records: 13763

Location	10m	12m	6m	2m	Campbell	Santee	Past
					m	s	Thorne
VIND DIRECTIONS:							
Radians:	3.483	3.797	3.940	3.986			
Degrees:	184.144	187.156	130.309	132.963			
MEANS:							
U:	2.399	1.274	0.259	0.263			
V:	-.251E-05	-.310E-05	-.748E-06	-.589E-06			
W:	0.043	-0.036	0.045	0.072	-0.528	-0.057	
T:			12.307				-0.197
SIGMAS:							
THETA:	0.138	0.270	0.463	0.402			
PHI:	0.078	0.132	0.441	0.095			
U:	0.457	0.443	0.118	0.088			
V:	0.380	0.344	0.170	0.106			
W:	0.188	0.148	0.114	0.035	0.080	0.096	
T:			0.450				0.407
SKEWNESS:							
U:	0.114	0.434	0.975	-0.100			
V:	0.301	-0.043	-0.183	0.027			
W:	0.072	0.259	-0.406	-.269E+00	0.557	-0.507	
T:			0.840				-0.053
Kurtosis:							
U:	3.091	3.353	8.306	3.793			
V:	3.546	3.577	5.975	3.204			
W:	2.999	4.397	3.721	3.472	8.777	4.044	
T:			3.951				3.905
Means of primes:	10m	12m	6m	2m			
UVV:	0.264E-02	0.175E-02	0.188E-03	0.901E-06			
UUV:	0.141E-03	-0.845E-02	-0.233E-03	-0.761E-06			
VVV:	-0.114E-03	-0.220E-03	-0.323E-03	-0.284E-04			
VVV:	0.423E-03	-0.668E-03	0.606E-05	0.511E-05			
UVV:	0.770E-02	0.754E-02	0.172E-03	0.630E-05			
UUV:	0.198E-02	0.975E-02	-0.300E-03	-0.712E-06			
UVV:	-0.175E-02	0.193E-02	0.273E-03	0.153E-05			
Momentum flux:	0.239E-01	0.414E-01	0.362E-02	-0.612E-05			
Non-Obukov:	0.129E+02		0.196E+01				
Heat flux:	-19.038		-4.369				
U*:	0.141	0.185	0.047	0.0021	S=Sign changed		

RAW DATA values:

MAX:	3.5010	3.1640	0.8880	3.2390	1.9000	0.8380	1.1790	1.2210
	0.4240	14.2900	0.4760	0.4330	0.1610	-0.0350	0.2380	-2.8090
MIN:	0.2130	0.1500	-0.6250	-0.0250	-0.3880	-0.6630	-0.1720	-0.6510
	-0.5730	11.0500	-0.1170	-0.2450	-0.0540	-1.7060	-0.5620	-5.7950

RUN: JUNE16a.fvf(1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	MCNMS	FILT
91	6	16	0	44	9	1	16	0

No. of records: 13613

Location	10m	12m	6m	2m	Campbell	Santee	Past
					m	s	Thorne
VIND DIRECTIONS:							
Radians:	4.786	5.221	6.041	5.483			
Degrees:	194.236	154.155	137.797	94.177			
MEANS:							
U:	1.936	0.803	0.389	0.330			
V:	-.337E-05	-.118E-05	-.328E-06	-.114E-05			
W:	0.007	-0.007	0.044	0.083	-0.325	-0.079	
T:			5.835				-3.203
SIGMAS:							
THETA:	0.103	0.205	0.203	0.267			
PHI:	0.048	0.038	0.339	0.100			
U:	0.293	0.224	0.070	0.077			
V:	0.199	0.185	0.095	0.079			
W:	0.092	0.031	0.062	0.032	0.052	0.061	
T:			0.111				0.233
SKEWNESS:							
U:	-0.426	0.332	0.197	-0.220			
V:	0.317	-0.268	0.073	0.234			
W:	-0.937	0.052	0.368	8338-01	-0.254	0.385	
T:			0.133				-0.381
Kurtosis:							
U:	2.338	2.553	2.775	3.068			
V:	2.111	3.376	3.220	2.384			
W:	3.264	4.098	3.118	3.291	3.805	3.538	
T:			3.147				3.731
Means of primes:	10m	12m	6m	2m			
UVV:	0.662E-03	0.111E-03	0.499E-04	-0.226E-04			
UUV:	-0.181E-04	-0.801E-04	-0.133E-06	0.559E-06			
VVV:	0.388E-03	-0.284E-04	-0.113E-05	-0.712E-06			
VVV:	0.152E-03	-0.946E-05	0.307E-04	-0.140E-04			
UVV:	0.387E-03	0.234E-03	0.218E-06	-0.210E-06			
UUV:	-0.430E-03	-0.466E-03	-0.609E-07	-0.388E-05			
UVV:	0.235E-03	0.463E-04	0.226E-04	0.214E-04			
Momentum flux:	-0.993E-03	0.389E-02	0.757E-04	0.283E-03			
Non-Obukov:	0.335E+01		-0.120E+01				
Heat flux:	-0.601		3.538				
U*:	0.0285	0.037	0.008	0.015	S=Sign changed		

RAW DATA values:

MAX:	0.6880	2.7910	0.7000	0.8880	1.4900	0.1380	0.5180	0.2240
	0.2930	6.1750	0.4380	0.3900	0.1910	-0.1890	0.1310	-2.4710
MIN:	-0.3000	0.9760	-0.3630	-0.0630	0.0650	-0.1380	0.0300	-0.1580
	-0.1490	5.4330	0.0030	0.0080	-0.0640	-0.4960	-0.2800	-4.0980

RUN: JUNE15B.fvf(1

YEAR	MONTH	DAY	HOUR	MIN	SEC	SCTIM	MCNMS	FILT
91	6	15	3	46	7	1	16	0

No. of records: 12936

Location	10m	12m	6m	2m	Campbell	Santee	Past
					m	s	Thorne
VIND DIRECTIONS:							
Radians:	4.566	4.860	6.111	5.680			
Degrees:	131.615	133.481	140.135	105.413			
MEANS:							
U:	1.959	0.965	0.279	0.276			
V:	0.539E-06	-.290E-05	-.246E-06	-.133E-05			
W:	0.025	-0.013	0.048	0.083	-0.348	-0.051	
T:			5.845				-3.036
SIGMAS:							
THETA:	0.092	0.176	0.240	0.241			
PHI:	0.060	0.062	0.185	0.055			
U:	0.273	0.255	0.064	0.081			
V:	0.181	0.144	0.067	0.047			
W:	0.117	0.058	0.052	0.015	0.041	0.043	
T:			0.217				0.239
SKEWNESS:							
U:	0.233	0.464	-0.058	0.058			
V:	-0.524	0.450	0.313	-0.438			
W:	-0.509	-0.475	-0.326	-.166E+00	0.014	0.047	
T:			3.470				-0.110
Kurtosis:							
U:	3.106	3.305	3.468	2.084			
V:	4.370	3.337	3.739	3.029			
W:	3.328	7.074	3.598	3.663	2.767	3.264	
T:			13.788				3.330
Means of primes:	10m	12m	6m	2m			
UVV:	0.587E-03	0.443E-03	-0.103E-04	-0.127E-05			
UUV:	-0.284E-03	-0.344E-03	-0.729E-06	0.277E-06			
VVV:	0.161E-03	0.243E-04	-0.219E-05	-0.815E-05			
VVV:	0.468E-04	0.123E-03	0.148E-04	0.107E-05			
UVV:	0.436E-03	0.177E-03	-0.889E-06	0.127E-05			
UUV:	-0.121E-03	-0.986E-03	-0.189E-05	0.230E-05			
UVV:	-0.161E-03	0.502E-04	0.156E-04	0.332E-05			
Momentum flux:	0.363E-02	0.628E-02	0.287E-03	0.826E-04			
Non-Obukov:	0.294E+01		0.872E+00				
Heat flux:	-4.776		-0.359				
U*:	0.054	0.071	0.015	0.008	S=Sign changed		

RAW DATA values:

MAX:	0.7880	3.3680	0.3510	0.7260	1.1910	0.3760	0.3670	0.2330
	0.2300	7.6300	0.3240	0.3650	0.1530	-0.2150	0.1060	-2.1640
MIN:	-1.1140	1.0140	-0.4760	-0.3380	0.1880	-0.3000	0.0300	-0.3430
	-0.2480	5.3730	0.0270	0.0050	-0.0100	-0.4760	-0.1990	-4.3090

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